LIBRARY OF CONGRESS DEC 29 1908 COPYRIGHT

THE LANCET.

A Journal of British and Foreign Medicine, Surgery, Obstetrics, Physiology, Chemistry, Pharmacology, Public Health, and News.

TELEGRAPHIC ADDRESS—LANCET, LONDON [ONE HUNDRED AND SIXTY PAGES.] TELEPHONE NUMBER—5366 GERRARD

No. XXV. of Vol. II., 1908. No. 4451. Vol. CLXXV. LONDON, SATURDAY, DECEMBER 19, 1908. PRICE 7d.; POST FREE, 7½d. [Pp. 120+40.

NOTICE TO ADVERTISERS

CHRISTMAS DAY occurring in the ensuing week, ADVERTISEMENTS for THE LANCET of Dec. 26th must reach the Office by 12 o'clock on WEDNESDAY next, Dec. 23rd.

NOW READY. PRICE 14s. NET.

SQUIRE'S COMPANION

(EIGHTEENTH EDITION)

1864—1908.

J. & A. Churchill, 7, Great Marlborough-street, London, W.

For further particulars see page 7.

New Work. 240 pp. Illustrated. 5s. net.

SPINAL CURVATURES: The General Principles of their Treatment.

With a Critical Analysis of the Gymnastic Theories.

"We must not fail to recognise, and to record our recognition of, the care and fulness with which the author has treated his subject. The book will be of value as containing the best exposition of this method of treatment."—THE LANCET.

"We attach importance to a supporting apparatus in the treatment of scoliosis. We do think that if the spine is supported in this way during growth it may grow straight, just as a bent tibia may."—BRISTOL MEDICO-CHIRURGICAL JOURNAL.

By HEATHER BIGG, F.R.C.S. Ed.

J. & A. Churchill, London.

W. CARNEGIE BROWN, M.D., M.R.C.P.

SPRUE and its TREATMENT. Fcap. 4to, 270 pp., with 2 Plates. Cloth, gilt lettered, price 6s. net.

London: J. Bale, Sons, & Danielsson, Ltd., Great Titchfield-street.

THE CAUSE AND PREVENTION OF

DENTAL CARIES.

By J. SIM WALLACE, D.Sc., M.D., L.D.S.

2s. 6d. net. Baillière, Tindall & Cox, Covent Garden, W.C.

Pp. xiv. + 196. With 20 Illustrations. Price 5s. net.

ULCERATION OF THE CORNEA.

By ANGUS MACNAB, B.A., B.Sc., M.B., B.Ch., F.R.C.S., Chief Clinical Assistant, Royal London Ophthalmic Hospital.

London: Baillière, Tindall & Cox, 8, Henrietta-street, Covent Garden.

Pp. xii. + 168, with 91 Illustrations. Price 6s. net.

HANDBOOK of INTESTINAL SURGERY.

By L. A. BIDWELL, F.R.C.S. Eng., Surgeon, West London Hospital; Lecturer on Intestinal Surgery and Dean, Post-Graduate College.

London: Baillière, Tindall & Cox, 8, Henrietta-street, Covent Garden.

THE CURE OF THE MORPHIA HABIT

WITHOUT SUFFERING.

By OSCAR JENNINGS, M.D. Paris, M.R.C.S. Eng.

"Contains the pith of a wide experience; full of practical hints; very pleasantly written. A work we can heartily recommend to the study of those who desire to relieve their patients of the thraldom of this terrible habit."—THE LANCET.

London: Baillière, Tindall & Cox. Second Edition, price 3s. 6d. net.

BY E. HURRY FENWICK, F.R.C.S.,

Surgeon to, and Lecturer on Clinical Surgery at, the London Hospital.

Now Ready. With 80 plates and 15 Text-Figures. 10s. 6d. net.

THE VALUE of RADIOGRAPHY in the DIAGNOSIS & TREATMENT of URINARY STONE. A Study in Clinical and Operative Surgery.

A HANDBOOK of CLINICAL CYSTOSCOPY. With 31 Plates and 144 Engravings in the Text. 18s. net.

URETERIC MEATOSCOPY in the DIAGNOSIS and TREATMENT of OBSCURE DISEASES of the KIDNEY. With 14 Plates and 45 Illustrations in the Text. 6s. 6d.

OPERATIVE and INOPERATIVE TUMOURS of the URINARY BLADDER. With 39 Illustrations. 5s.

ULCERATION of the BLADDER, SIMPLE, TUBERCULOUS, and MALIGNANT. With Illustrations. 5s.

TUMOURS of the BLADDER. Fasc. I. 5s. net.

CARDINAL SYMPTOMS of URINARY DISEASE. Second Edition in preparation.

ATLAS of ELECTRIC CYSTOSCOPY. (With Dr. BURCKHARDT, of Bâle.) With 34 Coloured Plates. 21s. net.

London: J. & A. Churchill, 7, Great Marlborough Street.

Just Published.

DR. HARRY CAMPBELL'S ON TREATMENT.

5s. net.

THE LANCET.—"It is quite refreshing to find such original ideas on a subject so widely written upon as therapeutics. ..... There is a quality about Dr. Campbell's writing that is very attractive. ..... We believe it will obtain a popularity which it thoroughly deserves."

BRITISH MEDICAL JOURNAL.—"No medical man will read it without a feeling of refreshment and real gain ..... abounds in that higher power of common sense which may properly be called wisdom."

BRITISH JOURNAL OF TUBERCULOSIS.—"It consists of a series of essays interesting in subject, graceful in form, and often marked by a piquant humour. Practitioners of all ages will find abundant material for serious contemplation and no little of practical service in these most attractive pages."

BRISTOL MEDICO-CHIRURGICAL JOURNAL.—"The book is full of sound teaching and is so interesting that it may well take precedence over the popular novel of the day."

Baillière, Tindall & Cox.

BICKHAM'S OPERATIVE SURGERY

NEW (3rd) EDITION—JUST ISSUED

GREENE AND BROOKS' DISEASES OF THE GENITO-URINARY ORGANS AND THE KIDNEY

RECENTLY ISSUED

See Saunders' Advertisement on Page 9.

CLIMATOTHERAPY & BALNEOTHERAPY.

Being a Third Edition of "The Mineral Waters and Health Resorts of Europe," much Enlarged in respect to Medical Climatology. By Sir HERMANN WEBER, M.D., F.R.C.P., and F. PARKES WEBER M.D., F.R.C.P., Physician to the German Hospital, London, and to the Mount Vernon Hospital for Diseases of the Chest, Hampstead. Edited by F. PARKES WEBER. Price 15s. net.

London: Smith, Elder & Co., 15, Waterloo-place.

Fourth Edition.

LECTURES ON

NEURASTHENIA.

By THOMAS D. SAVILL, M.D. Lond., Physician to the Welbeck-street Nerve Hospital.

"Deals very exhaustively with the subject."—THE LANCET.

H. J. Glaisher, 57, Wigmore-street, W. 7s. 6d. net; 7s. 10d. by post.

By W. ARBUTHNOT LANE, M.S.

OPERATIVE TREATMENT of FRACTURES

Demy 4to. 7s. 6d.

THE OPERATIVE TREATMENT of CHRONIC CONSTIPATION.

Uniform with above. 2s. 6d.

CLEFT PALATE and HARE LIP.

Uniform with above. 5s.

The Medical Publishing Company, Ltd., 22½, Bartholomew Close, E.C.

THERAPEUTICS of the CIRCULATION.

EIGHT LECTURES delivered in the Spring of 1905 in the Physiological Laboratory of the University of London.

By Sir LAUDER BRUNTON, BART., M.D., D.Sc., LL.D.(Edin.), LL.D.(Aberd.), F.R.C.P., F.R.S., Consulting Physician to St. Bartholomew's Hospital.

Published under the auspices of the University of London.

Demy 8vo. 7s. 6d. net.

John Murray, Albemarle Street, W.

SECOND EDITION, with Illustrations, royal 8vo. 10s. 6d.

TREATMENT of LATERAL CURVATURE of the SPINE. By BERNARD ROTH, F.R.C.S.

"In speaking of the first edition we expressed the hope that this book would do something to check the unscientific and often disastrous treatment of lateral curvature of the spine by spinal supports and prolonged rest, and this new edition is even better calculated to show the good results which may be obtained in lateral curvature by posture and exercise."—THE LANCET.

"There can be no doubt that good work has been done by the author by his strong advocacy of the more rational method of treating lateral curvature of the spine by exercises."—BRITISH MEDICAL JOURNAL.

London: H. K. Lewis, 136, Gower-street, W.C.

 THE LANCET is registered as a Newspaper. All rights reserved.

It is claimed for . . **VI-TONICA** that it is a brain food, a stomachic and tonic for the nerves of the highest order, and at the same time it is a first-rate pure beverage.

When ordering name this Journal.

THE NEWEST AND BEST TEMPERANCE BEVERAGE

VI-TONICA

NATURE'S RESTORER.

An Invigorating and Refreshing Beverage.

NON-ALCOHOLIC.

Equally pleasing for Old and Young in Winter or Summer.

Bottlers: SLACK & COX, Ltd., Manchester.

Re: BROMURAL

(α-Monobrom-isovalerianyl-urea.)

Though BROMURAL creates a quiet state of the nerves, whereby the necessary restful sleep is attained, it cannot be given in lieu of the direct and prompt-acting hypnotics, but simply as a harmless

POWERFUL NERVE SEDATIVE

As such its action supersedes many times that of the Bromides without showing the slightest injurious by- or after-effects. It is especially efficacious in all forms of nervous excitability and insomnia associated with mental overwork, hysteria, nervous dyspepsia. It is quickly eliminated from the body, and 5–10 grains might therefore be given several times during the day.

KNOLL & CO., 8, HARP LANE, LONDON, E.C.

By Appointment **to H.M. the King.**

The Non-toxic # Cyllin **Bactericide.**

(Medical)

Has a guaranteed Rideal-Walker Co-efficient of 20.0. It is therefore equal to Perchloride of Mercury as a bactericide. *(Vide "The Medical Press," Feb. 14, 1908.)*

N.B.—It has been found necessary to substitute the term "Rideal-Walker Co-efficient" for that originally introduced by the authors, viz., "Carbolic Acid Co-efficient," owing to the abuse of the latter on the part of unscrupulous manufacturers and vendors.—*Vide British Medical Journal*, April 6th, 1907.

Preparations of Cyllin:—

Cyllin Capsules (palatinoids)—Recommended for Gastric or Intestinal Antisepsis.

Cyllin Syrup—For use where indicated in Infantile Diarrhœa.

Cyllin Inhalant—For use with Cyllin Inhalator in suppurative conditions of the bronchial passages, &c.

Lano-Cyllin—For use in Eczema, Pruritus, and other Inflammatory conditions of the Skin.

Cyllin Pastilles—Antiseptic Throat Lozenges; invaluable for purposes of mouth hygiene.

Cyllin Obstetrical Lubricant, Soaps, Lint, Dusting Powder, etc.

See Pamphlet entitled "Standard Chemical Disinfectants." Copies, together with working Samples, sent gratis and postage paid on applying to

Jeyes' Sanitary Compounds Co., Ltd., 64, Cannon St., London, E.C.

The Bradshaw Lecture
ON
THE TREATMENT OF WOUNDS.

Delivered before the Royal College of Surgeons of England on Dec. 4th, 1908,

BY SIR W. WATSON CHEYNE, BART., C.B., F.R.S., M.B., C.M. EDIN., F.R.C.S. ENG.,
SENIOR SURGEON TO KING'S COLLEGE HOSPITAL, ETC.

MR. PRESIDENT AND GENTLEMEN,—In taking as the subject of the Bradshaw lecture a critical examination of the present views and methods of treating wounds, I do not think that I need say anything by way of apology for my choice. It is one of the great advantages of lectures such as these that they afford an opportunity not only of introducing new views and observations but also of weighing the theories and practice current at various periods, and of considering how far they accord with definitely ascertained facts and how far we are following the right lines. In a subject such as medicine, where knowledge is still very imperfect, there is a constant oscillation in the views which are current from time to time, and a constant swing of the pendulum of medical opinion in one or other direction, sometimes very extreme and far beyond what is justified by the facts of the case. One has constantly to be on one's guard not to be carried too far by this swing—on the one hand not to discard too hastily the results of previous research and experience, and on the other not to overlook what seems to be sound in the new work. Nowhere is this oscillation of opinion more marked at the present time than in the views founded on experimental and chemical pathology, and more especially in connexion with the new science of bacteriology and the relation of bacteria to the living body. And when the wish was expressed to me that I should take up the subject of the treatment of wounds at the present time I was the less reluctant to do so, seeing that as regards that matter we are just now in one of those extreme oscillations. Whether this swing has gone too far or not is the point which I purpose to consider in this lecture, and it will therefore be advisable in the first place to recall as simply as possible the essential points which relate to the treatment of wounds and to the avoidance of the infective disasters which are ever ready to occur when the attention of the surgeon is relaxed, and in the second place to examine the current views and details of practice with the object of seeing how far they meet the requirements of the case.

What first put Lister on the track of his epoch-marking work was the consideration of the behaviour of a subcutaneous wound as compared with an open one, and his aim from the very first was to place an open wound as far as possible under the same conditions as a subcutaneous one. In the open wound two sets of noxious agencies come into play. In the first place, it is exposed to a variety of mechanical and chemical irritations from the dressings, air, &c., and in the second place to the entrance of infective agents. The surface of the wound, for instance, comes in contact with dressings and is mechanically irritated by movement, &c. And in the attempts to get a wound to heal it may also be irritated by various chemical substances intentionally applied to it, with the result that instead of healing rapidly the tissues are kept in a constant state of irritation, exudation goes on and cells accumulate in the part, the original tissue at the surface is destroyed, and its place is taken by granulation tissue. It is true that if irritation of this kind is but slight healing will nevertheless take place readily, but if it be excessive it may be markedly delayed or actually prevented.

Even where an open wound is stitched up, and thus, as far as these mechanical and chemical causes of irritation are concerned, is converted into a subcutaneous one, very serious troubles much more grave than those alluded to above may arise, due to the entrance of various forms of bacteria into the wound and their growth either in the discharges present in it or in the tissues themselves. It is in reality to these organisms rather than to the other agencies to which I have referred above that the essential troubles in connexion with open wounds are due. Apart from the growth of bacteria, it would be quite easy to minimise the other sources of irritation so that little, if any, delay in healing should result, and in the absence of micro-organisms none of the serious troubles which affect the health or life of the patient or of the part, and which so often used to follow open wounds, would arise. These troubles are practically entirely due to bacterial infection, which occurs as soon as the skin is broken or so injured that it is deprived of its vitality, and the essence of the problem of the treatment of wounds is how to avoid such infection. It was this problem that Lister attacked, and though the main principle on which he proceeded from the first was to prevent as far as possible the entrance of bacteria into wounds he laid much stress on the avoidance of undue irritation of the latter in the process. In fact, his ideal was so to alter the conditions in an external wound as to approach as closely as possible to those in a subcutaneous one. The question for review, then, is how far this ideal is or can be attained and what are the best methods to adopt for this purpose.

1. In the first place, let us consider the question of the exclusion of bacteria from wounds. Lister began by trying to kill the bacteria before or when they came in contact with the wounds, and for this purpose he had recourse to the use of various chemical substances belonging to the class now known as antiseptics. In his earliest work, which had to do with compound fractures, the wounds being already soiled and infected, the method he adopted was to apply undiluted carbolic acid to the wound, with the view of destroying the organisms which had already entered it before the patient came under the notice of the surgeon, and then in order to prevent the access of fresh bacteria he made a paste with the blood contained in the wound and the undiluted carbolic acid, which must have effectually prevented the further entrance and growth of micro-organisms. This original plan was very soon modified, and the constant efforts which he made to improve his methods in the direction of less irritation of the wounds with at the same time efficient exclusion of bacteria will be found detailed in his collected papers.

When I became house surgeon to Lord Lister in Edinburgh in 1876, it occurred to me to test the discharges of the wounds which were under his treatment to see how far the desired result—viz., the exclusion of bacteria—was really attained. At that time it was easy to examine this matter very thoroughly, because in the case of practically every operation a drainage-tube was inserted and was retained for from four to eight days, and as long as the tube was present the dressing was changed daily. At that time the modern methods of staining bacteria had not been introduced and I had, therefore, to devise methods of cultivation in various fluid media. These methods need not be detailed here, but the results so obtained were very definite and entirely coincided with those got in after years by simpler and better methods of cultivation and also by suitable staining of the discharge. The results practically came to this, that as a rule in wounds treated by Lister's methods no organisms were found in material taken from the interior of the drainage-tube during the first few days, but that afterwards one began to find micrococci in a certain proportion of the cases, especially if the dressing had been left unchanged for more than 24 hours or if old epithelium had been allowed to accumulate under the dressing. Suppuration, however, did not necessarily occur, even when these organisms were present. I therefore assumed that they were innocuous organisms, either of a special kind or else the common pyogenic organisms deprived of their infective power by the antiseptics employed. I also came to the conclusion that they spread into the wound under the carbolic gauze dressing by growing in the epithelium, for I found that they were present in the old epithelium at some distance from the edge of the wound in larger numbers and at an earlier period than in the wound itself. It was thus evident that bacteria either did not get into the wounds at the time of the operation, or if they entered they found themselves under such conditions that they were unable to grow, but that at a later period of the case they might spread in, presumably under the protection of the superficial layers of the epithelium, even though the part was covered by a carbolic gauze dressing. After the drainage of wounds was to a large extent given up, it was not so easy to test this matter thoroughly, because

when the first dressing was changed, usually after a week, the wound had healed. If, however, for the purpose of investigation one dresses such wounds early, one obtains a negative result as regards the presence of bacteria in their interior. Further, in cases where as the result of leaving too large a cavity or from some other cause serum accumulates in the wound, one may find on evacuating it even after a week or more that it does not contain organisms. As a practical fact, therefore, we may take it that organisms do not grow in wounds treated by strict Listerian precautions.

But can we say that living bacteria do not gain access to wounds at the time of the operation and are not present there in a living state when the wound is closed? It is quite probable that in the earlier methods of treatment, such as the application of undiluted carbolic acid, the bacteria were all destroyed, and no living organisms were left in the wound. But that can hardly be the case in the later developments of the Listerian method, especially in the plan which is so much the fashion now—namely, the so-called aseptic method. No doubt the entrance of living organisms during the operation from external objects such as the skin, the instruments, the ligatures, &c., can be prevented, but their entrance from the air can not. We know that air in a state of motion is full of dust, and if we expose plates covered with nutrient jelly to such air we find that various spots of growth appear on the surface, their number and the character of the organisms which compose them varying according to the length of time the plates are exposed, to the place where the exposure is made, and to the moisture of the atmosphere. Why, then, are these organisms not found in the discharge contained in the wound after 24 hours?

This raises a very wide question. If organisms do not, as a rule, grow in a wound when the only loophole for their entrance is the air, why is it that they so constantly grow in wounds when no antiseptic precautions have been taken and where other loopholes have therefore been left open? This depends, in the first place, on the kind of organism which enters. If plates covered with nutrient jelly are exposed in an ordinary dry atmosphere, the great majority of organisms which develop are moulds or various kinds of bacilli. As a matter of fact, the chief living contents of the dust of the air are spore-bearing organisms, for non-spore-bearing organisms, such as the micrococci, cannot withstand drying and soon lose their vitality when deprived of moisture. We may therefore assume that the fungi and bacilli which are ordinarily present in the atmospheric dust are unable to grow in the living tissues of man; in other words, are not pathogenic in man, at any rate under the conditions present in a wound treated by strict Listerian methods.

The chief habitat of the pyogenic cocci so far as infection of wounds is concerned is the skin of the patient or the operator or discharges from wounds which may be present in the neighbourhood of the seat of operation. Where, therefore, the skin of the patient and the hands of the operator are thoroughly disinfected, and where precautions are taken which prevent further contamination, the probabilities are that there are many wounds into which no pyogenic cocci have entered and where the only organisms which fall in are non-pathogenic to man. Nevertheless one does find cocci closely related to the pyogenic ones and sometimes actually belonging to that class in atmospheric dust, especially where the air is moist, and in a prolonged operation it is highly probable that organisms of that class also fall into the wounds and yet they do not grow. Hence, we must consider the other possibilities.

Early in the development of bacteriology it was shown that pathogenic power was a property which varied very markedly and which could be impaired by a variety of comparatively slight causes; among others, the use of various antiseptic substances in a dilution short of that required to kill micro-organisms was found to diminish their pathogenic activity. For example, among the various ways in which the virulence of the anthrax bacillus can be diminished or "attenuated," as the French expression is, one is the action of weak solutions of carbolic acid on the organisms for varying periods of time. Hence, when, as already stated, I found micrococci in the discharges from wounds which were following an aseptic course, in the old days of carbolic gauze and the freer use of carbolic lotions, I thought that the explanation might be that the virulence of the organisms had been diminished by the action of the carbolic acid, and the same may have been the case with cocci coming from the air in the old days of the carbolic spray. This, however, though a plausible explanation, did not seem to me on more careful consideration to be altogether sufficient to explain the facts.

On thinking further over these matters it occurred to me to inquire whether the number of bacteria which entered the body at any one time was of importance and whether this might explain the improved results of those who had not fully adopted the Listerian treatment but who, nevertheless, tried to be as cleanly as possible—that is to say, who introduced as few bacteria as possible into their wounds. The fact already demonstrated by Lister that, in order to produce putrefaction in blood clot in glass vessels, it was necessary to add a definite, though small, quantity of putrid material, and the statement that good results were obtained by simply washing the hands and skin with soap-and-water, in operations on the peritoneum especially, seemed to make it worth while to try a few experiments on the subject. The result showed that the number of bacteria which initiate the disease is in certain cases of paramount importance, and this has now become one of the fundamental bacteriological facts. In only very few cases was a single bacterium able to start disease; in most instances several were necessary, while in some large numbers were required. Thus in the case of anthrax and mouse septicæmia one bacterium was apparently sufficient to start the disease in guinea-pigs and mice respectively, while in the case of rabbits several anthrax bacilli were required. In the case of tetanus no result followed the introduction of less than 1000 bacilli into rabbits. With somewhat larger doses a local tetanic spasm of the limb inoculated occurred from which the animal recovered, while larger numbers caused death, till 40,000 and over killed the animals in two days. In the case of pyogenic cocci in rabbits the numbers required to produce disease were very much larger, something like 100 to 300 million being required to produce an abscess, and 1000 million to cause death. The results, of course, vary with the species of animal tested; in other words, with the susceptibility of the animal to the action of a particular organism. Among other conclusions arrived at the following may be mentioned as bearing on our subject: (1) The pathogenic dose of a virus varies inversely with the predisposition of the animal to the disease in question; and (2) in animals not very susceptible to a disease, the severity of the affection varies directly within certain limits with the amount of the virus introduced in the first instance. The same facts apply according to the virulence of the organism. Where the organism is in a high state of virulence a smaller number will be required to produce the effect in a suitable animal than where the virulence is what we may term normal; and, conversely, if the virulence is diminished a larger number of organisms will be necessary. As regards the pyogenic organisms in man, I came to the conclusion that man was not a particularly susceptible subject for the growth of these organisms, and that, therefore, a considerable number were required to produce a pathogenic effect.

Thus we have three reasons why wounds treated on Listerian principles are found to be free from organisms, even although it is certain that organisms of some kind or other do enter during the operation. 1. No pathogenic organisms are admitted at the time of the operation; this is probably so in most instances. 2. If pathogenic organisms do enter they may be so few in number that they cannot obtain a footing. 3. The pathogenic organisms which enter may have such slight virulence, either naturally, or acquired as the result of the action of the antiseptics with which they come in contact, that they cannot overcome the resisting power of the body. As a matter of fact, the organisms which usually enter during a carefully performed Listerian operation are either non-pathogenic bacilli or the ordinary micrococcus epidermidis which has only very slight, if any, pathogenic power.

2. Let us now refer in the second place to the effect on the tissues of the methods employed to prevent bacteric infection. In the treatment of wounds we must not concentrate our whole attention on the exclusion of bacteria. We must also avoid irritation of the tissues exposed in the wound as far as possible. I have already referred to this matter and to the results which may follow as regards the healing of wounds from too great irritation. The question here is how far the measures necessary to prevent bacteric infection do

or need interfere with healing. In the earlier development of the treatment no doubt wounds were considerably irritated by the antiseptics employed, and though that did not go so far as to interfere seriously with healing it led to excessive effusion of serum and necessitated the constant use of drainage-tubes and therefore frequent changes of dressings. Since, however, the carbolic spray has been given up, drainage-tubes have been found to be unnecessary unless in exceptional cases. As a matter of fact, as we have managed matters of late years, no carbolic acid comes in contact with the wounds, and the few drops of sublimate solution which may get in on the fingers, &c., are at once precipitated by the blood and rendered inert.

Apart from interference with healing, excessive irritation of a wound has another bad effect in that it diminishes the resisting power of the tissues, and thereby may enable organisms to take root which otherwise would have been unable to do so. At first sight, in accordance with recent views on the importance of the serum in connexion with resisting power, one might think that an increased flow of serum as the result of the irritation of the wound would be a good thing, but in my opinion the important seat of the resisting power of the body is in the tissues. In the Wightman lecture delivered last May I discussed the defensive arrangements of the body and showed that they resided in the main in the tissues, and that an extremely important point in connexion with the subject was the local differences in the resisting power. I instanced, for example, the different behaviour of the tubercle bacillus in the various bones and joints of the body, and similar differences exist in the case of the pyogenic organisms, according to the part of the body into which they are introduced. Thus we know that if pyogenic organisms enter joints, or bursæ, or lymph spaces they produce much more violent effects than if they are introduced into the peritoneal cavity or into the subcutaneous areolar tissue.

That the living tissues have the power in some way or other of disposing of bacteria was quite early recognised by Lister. He frequently referred to this point in his lectures and showed specimens of urine free from growth which had been obtained simply by cleansing the orifice of the urethra and then passing the urine into sterilised flasks with precautions against the entrance of dust, thus proving that bacteria could not spread along a healthy urethra. He also pointed out the influence of the tissues in preventing the growth of bacteria, as exemplified by the results of operations performed in situations where bacteria cannot be excluded. For example, in operations for hare-lip and cleft palate union by first intention is the rule, provided the tissues are not handled roughly, even though the wounds are bathed with saliva containing large numbers of bacteria.

Now when we have said above that non-pathogenic bacilli or only slightly virulent cocci, or only cocci in small numbers may get into wounds made under Listerian precautions, but under these conditions cannot grow, this failure to grow must clearly be due to the action of the living tissues, for under any of these circumstances growth would occur if the tissues were dead; while the tissues are alive, therefore, they have the power of opposing the growth of bacteria and actually destroy them under favourable conditions.

This action of the tissues in destroying bacteria can be seriously interfered with in various ways in the course of an operation, such as by severe handling and bruising, by the excessive use of antiseptics, or even by washing the wound with plain water, which causes the cells to swell up and lose their vitality, and which is about the worst thing that one can introduce into a wound from this point of view. If under any of these circumstances scrupulous care be not taken to prevent the entrance of pathogenic bacteria into a wound, and if they do enter in any considerable numbers, they can grow more readily and produce more violent effects than in wounds which have been more carefully treated. The experience of years, however, shows that the minute traces of antiseptics which may get into wounds during a properly performed Listerian operation have no appreciable effect in retarding the healing of the wound or in interfering with the resisting power of the tissues.

As a result of the foregoing considerations we see that there are two great points to be kept in mind in treating wounds—namely, (1) the exclusion of bacteria, especially of pathogenic organisms, as far as possible during and after an operation; and (2) avoidance of irritation of the surface of the wound so as not to interfere with healing, nor with the power of the tissues in preventing the growth of any bacteria which may have entered. These are the two essential principles which Lister laid down, and which his immediate pupils have tried to follow. It is interesting indeed to see how Lister, beginning by making the exclusion of bacteria from wounds his main aim and having apparently attained this object, devoted increased attention to the avoidance of irritation of the wounds by the means employed to keep out the bacteria. In fact, in the later period of his work his main efforts were directed to the search, not for more efficient antiseptics, but for equally efficient antiseptics, which would be as little irritating as possible to the wound. It is always the tendency, however, of pupils to out-Herod their masters and thus many of those who took up Listerian treatment went to the extreme of deluging their wounds with carbolic acid and disregarded Lister's second postulate; they thus became well acquainted with the poisonous and irregular action of the antiseptics employed, while at the same time they did not always succeed in avoiding infection. Indeed many, thinking that everything necessary was done if only carbolic acid were employed, forgot the most elementary precautions, especially the cleansing of the hands and the avoidance of reinfection of the hands during the operation. And the result was that sepsis occurred and was often, indeed, more severe than if no antiseptic had been employed, owing to the diminution of the resisting power of the tissues as the result of the irritation of the antiseptic. Curiously enough, many men at the present day who have not been intimately acquainted with Lister's own work think that that was Lister's treatment, and that there is, therefore, some fundamental antagonism between the Listerian principles and the so-called aseptic treatment of the present day. From this extreme travesty of Listerian treatment the pendulum has swung completely round to the other extreme, and the surgeon's efforts have of late been largely directed to avoiding the contact of antiseptic chemical agents with wounds and to injuring the tissues in that way as little as possible. In fact, in the hands of the extremists this point has been carried as far beyond the mean as the abuse of antiseptics was in former times.

As far as I can judge, what led to this swing of the pendulum was, firstly, the excessive use of antiseptics with unsatisfactory results of which I have just spoken; secondly, the constant statements as to satisfactory results obtained by ordinary cleanliness; thirdly, the slow action of antiseptics in destroying spores and their consequent inefficiency under certain conditions; fourthly, various statements as to the difficulty of disinfecting the skin—that is to say, of entirely eradicating the bacteria—which have led many to look on it as a hopeless task; and fifthly, an exaggerated belief in the resisting power of the body.

The first of these points I have just referred to. As regards the second, the opposition to the strict Listerian treatment arose in the first instance and chiefly from surgeons whose operative work dealt essentially with the peritoneal cavity. When, however, these surgeons had to operate on the tissues in other parts of the body they encountered a discouraging amount of suppuration. This is explained by the difference in resisting power in different tissues; evidently the peritoneum has a special power of dealing with bacteria when they are not present in too great numbers or in too virulent a condition.

As to the third point, doubt has arisen as to the efficacy of chemical antiseptics in destroying bacteria, and this is probably a reaction from the idea that antiseptics are instantaneous in their action, which was, of course, the only justification of the use of the spray. Koch was the first to test this matter definitely, and the chief point brought out by his researches was the great difference in the resisting power of actively growing bacteria on the one hand and of spores on the other. In the case of the former, if the antiseptic solution can obtain free access to the organisms, it is only a matter of seconds, or at most of a very few minutes, before they are completely destroyed, provided the solution is sufficiently strong. In the case of spores, on the other hand, the time is much longer, but in any case 1 in 20 carbolic lotion kills them in 24 hours. Where bacteria are surrounded by albuminous material the antiseptic coagulates the albumin and this coagulum may prevent the penetration of the antiseptics, especially of the

mercurial preparations, and thus protect the bacteria in the interior for a long time. Carbolic acid, however, can penetrate this coagulum and even under these circumstances will, as a rule, lead to complete destruction of the bacteria and their spores in 24 hours. It is well to recall these facts, for the extremists seem to forget that antiseptics can do what is asked of them and that heat is not the only way of destroying bacteria. It is not really necessary to try to devise elaborate methods of sterilising materials such as catgut by heat, or to discard the use of valuable articles such as marine sponges because they are spoilt by boiling. Immersion in suitable antiseptic solutions for the appropriate length of time will be thoroughly effectual in these cases.

As regards the fourth point, I believe that the extreme aseptic views have sprung up to a large extent from the statement that it is practically impossible to disinfect the skin. I confess that these statements puzzle me very much, bearing in mind the uniformly aseptic results which we have for years obtained without the use of gloves—results which have not and cannot be improved upon. In the absence of organisms from our wounds and the aseptic course they pursue it is difficult to believe that the skin has not been thoroughly disinfected. Some time ago I went over all the various points in the technique to see how far we were working under bacteria-free conditions, and the ordinary methods of disinfection of the skin seemed quite satisfactory, except in a few situations such as the axilla and the perineum. My plan was to disinfect the skin with antiseptics in the ordinary way and then to flush the part carefully with sterilised water so as to remove the antiseptic; then to scrape the skin so as to obtain the epithelium and to implant that into tubes of suitable material. The conclusion I arrived at was that there was no difficulty in disinfecting the skin except in the situations I have mentioned. In the case of children and in parts of the body where the skin was thin the disinfection seemed to be thorough and rapid. I was therefore at first very much surprised at the statements as to the difficulty of disinfecting the skin. These statements rest on a different method of testing the matter than that which I adopted—namely, a piece of the whole thickness of the surface, and it is assumed that the organisms lie in the deeper layers of the epithelium and in the sweat and sebaceous glands, and thus escape the action of the antiseptics. It is very difficult, however, to believe that organisms inhabit the sebaceous and sweat ducts and glands without causing trouble; besides, we must also assume that these canals differ from others, such as the healthy urethra, along which organisms seem unable to penetrate for any distance. It may also be pointed out that this method of testing the matter is more open to the risk of contamination than that of taking the epithelium alone, and also that much depends on the methods of disinfection employed. I believe it is essential to employ carbolic acid for the disinfection of the skin. It mixes with the fatty material and penetrates through the epithelium in a way that no other antiseptic does. Mercurial solutions are very inefficient as they do not mix with fatty material, and thus do not penetrate the epidermis. Even after washing the skin thoroughly with etherial soap the mercurial solution collects in drops like water on a duck's back, while carbolic lotion wets the skin uniformly. In many of the experiments mercurial preparations have apparently been the antiseptic employed. In any case, however, I would maintain that my method of experimentation is the better test and more in accordance with the practical technique.

Fifthly, these views as to the inefficiency and harmful action of antiseptics have coincided with an increased belief in the resisting power of the tissues to bacteric invasion, and in the minds of some it has seemed of even greater importance to try to keep up or to increase the resisting power of the tissues than to destroy the bacteria. The importance of this point was early realised by Lister and has not been lost sight of and there is no doubt that every care must be taken to interfere as little as possible with these protective agencies. It is, however, really a question of relative importance, and I believe that where we have to do with an operation through unbroken skin the most important point is to prevent the entrance of bacteria. Experience amply shows that this can be done as far as is necessary without materially damaging the resisting power of the part. On the other hand, where the operation is performed in regions such as the mouth, where bacteria are present and cannot be excluded, while fresh contamination should of course be avoided, the chief reliance must be placed on the resisting power of the tissues, and everything which may to any extent diminish that must be avoided. At the present time the subject of resisting power is still in the stage of development, and in any case ample clinical experience has shown us that we must not place too great reliance on this factor.

Let us now see how far the methods of wound treatment at present adopted meet the requirements of the case. Of late many surgeons have gone to extremes in the avoidance of antiseptic solutions and speak of the plan they use as "aseptic surgery." This term "aseptic surgery" is in my opinion not a good one. It is looked on by some as implying a different principle to the Listerian one, but, of course, that is not the case. It is only carrying to an extreme the principle of avoiding irritation of wounds and giving Lister's second postulate a position of undue prominence. It is fortunately only a few surgeons who misread the facts to such an extent as to give up any attempt at excluding bacteria and depend upon what is popularly known as cleanliness. These use water boiled or unboiled, sometimes not even adding chloride of sodium to it, and are thus under the happy delusion that they are using materials which will not interfere with the normal resisting mechanism of the body. But so far as that mechanism depends on the integrity of leucocytes and other cells in the wound they might as well, or even better, use antiseptics; for one has only to watch the behaviour of these cells under the microscope, on the addition of plain water, to see how rapidly they swell up and become completely disintegrated. I used the term "aseptic surgery" many years ago to indicate Listerism, with the meaning that the wound was kept aseptic, as opposed to "antiseptic surgery," where attempts were made to eradicate sepsis from wounds already infected. At the present time "aseptic surgery" is used to indicate the character of the materials used rather than the result of the procedure. I confess I do not like this use of the term and prefer my own. By all means speak of "aseptic dressings," but in speaking of aseptic surgery we ought, I venture to assert, to refer to the results of the method rather than to the materials employed. Even the term "aseptic treatment" is not quite accurate if it implies treatment without antiseptics, for the disinfection of the skin cannot be carried out without antiseptics. As a matter of fact, however, it is only in certain details that differences exist between those who still adhere to the full Listerian views and those who go to extremes in the avoidance of chemical antiseptics. For my own part, I still adhere to the moderate party—if I may so term it—and consider that antiseptics should not be discarded altogether, but that their judicious use is advisable and important.

Three things have to be borne in mind in connexion with an operation. In the first place we have to see that the skin of the operator and the patient is as thoroughly disinfected as possible, and that no instrument or other article which comes in contact with a wound is soiled with living bacteria; in the second place, we have to avoid accidental infection of the wound during the operation; and in the third place, we have to avoid infection of the wound subsequent to the operation.

As regards the *first point*, we have to consider the disinfection of the chief things which must of necessity come in contact with the wound, and more especially the disinfection of the skin of the patient in the region of the operation and of the surgeon's hands and arms, for the chief source of contamination of wounds with pyogenic organisms is no doubt the skin of the patient and of the operator. I do not think that there is any real divergence of views as to the necessity for this procedure, and there is general agreement that this can only be satisfactorily carried out by the use of antiseptics. No doubt there are considerable differences in the methods of disinfecting the skin, but I need not go into them. It is true also that a few surgeons are content with rinsing the skin of the patient and of their own hands in boiled water, but I fancy that most will agree that that does not meet the requirements of the case.

In addition to the disinfection of the skin a good many surgeons take the precaution of wearing gloves in case the disinfection of the hands has been imperfect; indeed, some

pparently wear gloves without disinfecting the hands, look-g on the sterilised gloves as a complete safeguard. ubber gloves no doubt may be depended on so long as they e free from holes, but as they are very liable to be nctured or torn it is somewhat rash to trust to them tirely, and therefore I think that whether gloves are to be orn or not the hands should be as thoroughly disinfected possible. In fact, in putting on rubber gloves I always ll them with 1 in 2000 sublimate solution and in this way a ttle of the solution remains in contact with the skin of the nds and continues to disinfect them, a point of some portance should the gloves give way during the course of e operation. As regards this question of wearing gloves have previously said that the results at the present time e no better than they were by the Listerian method before ese extreme precautions were introduced, in fact, could ot be better, and therefore gloves are not at all a neces-ty for those who do not discard the use of anti-ptics. But, nevertheless, considering all the possibilities, oth of imperfect disinfection of the skin and of possible ntamination of the hands during the operation, I regard e use of indiarubber gloves as a valuable addition to the ecautions and in the so-called aseptic method they are a ecessity. They add security against carelessness in the dis-fection of the hands. Besides, apart from carelessness, me surgeon's hands are more susceptible than others to the tion of antiseptics and those who are so afflicted are nsequently apt to be perfunctory in their antiseptic lutions, and even where the surgeon does take pains to dis-fect his hands the skin under these circumstances becomes ugh and is difficult to cleanse thoroughly. Further, if there any suspicion of having contaminated his gloves during e operation the surgeon need have no hesitation in oroughly washing in an antiseptic solution, as he might if were not wearing gloves and his hands were sensitive. otton gloves are, I think, a mistake; used alone they do t protect the wound from the hands and used over rubber oves they prevent the surgeon washing the gloves clean in se they have become contaminated. The only advantage that they give a better grip.

Formerly instruments were disinfected in 1 in 20 carbolic tion; now they are universally boiled, and although in ost cases the former method is quite effectual boiling is, I ink, much more satisfactory, especially in the case of othed instruments, such as Spencer Wells's forceps, &c. t the same time, boiling in ordinary water tends to blunt arp instruments, such as knives, scissors, and needles, and the case of those three I prefer to immerse them for a ort time in undiluted carbolic acid and then in 1 in 20 rbolic solution in place of boiling them.

With regard to disinfection by boiling, it must be remem-ered that boiling water is not instantaneous in its action ny more than carbolic acid is. One frequently finds that urses have the most profound belief in the rapid action of oiling as a disinfectant. An instrument falls on the floor, he nurse picks it up and says that she will sterilise it in a inute; and this is no mere figure of speech: she is actually ack in a minute with the instrument, all that she has done eing either to dip it into boiling water or to throw it into he steriliser and pick it out almost immediately. This, of ourse, is much too rapid for disinfection, and indeed the ength of time required for properly disinfecting an instru-ent by boiling raises a difficulty in cases where it has not een put out beforehand and where it is wanted in a hurry uring an operation. In that case I believe the quickest and afest plan is to immerse it in undiluted carbolic acid for a inute or two and then to place it in 1 in 20 carbolic lotion ill it is required.

Among other things which come in contact with a wound uring an operation, and which may convey infection to it, may specially mention sponges. I think it will be gene-lly admitted that for the purpose of removing blood from ounds marine sponges are superior to swabs, and yet he great majority of surgeons have given up their use. his is, I believe, in the main due to the conviction which eems to have become deeply rooted, that heat is the only dependable method of disinfection, and marine sponges are uined by heat; and also to the terror which some people ave of antiseptic solutions. 1 in 20 carbolic acid will destroy acteria and their spores in 24 hours, even in an albuminous luid; if marine sponges are kept in this lotion for a week hey may certainly be depended upon to be completely dis-nfected. This is not a matter of theory but of experiment. For my part I always use marine sponges. They are thoroughly washed and immersed in 1 in 20 carbolic acid for at least a week before use. It is quite easy to wash out the carbolic acid from the sponges subsequently either in a weak sublimate solution or in sterilised salt solution. I have never seen any reason to reject marine sponges, either from the point of view of asepsis or from that of irritation by antiseptics, and as a method of drying a wound there is no comparison between them and swabs. Apart from the greater usefulness of marine sponges, I object to swabs in aseptic cases, because, as they do not absorb fluid readily, there is more rubbing and consequent disturbance of the surface of the wound when swabs are employed, especially if they are used dry; and further, except in specially made swabs, threads are apt to be left behind in the wound, which may form a nidus for the development of bacteria, if any have entered during the operation. The importance of the latter point is by no means inconsiderable. For example, we find in the early experiments on tetanus that infection could not be brought about at all readily unless the bacilli were attached to some inert substance such as a silk thread. If injected subcutaneously in small numbers in suspension in fluid, no effect was produced, while silk threads soaked in a suspension of bacteria and placed beneath the skin led to the desired result. I venture to think that the way in which marine sponges have been thrown aside, and swabs, whether wet or dry, have been substituted, is regrettable and introduces an unnecessary complication into the operation.

We may say, therefore, that as regards the preliminary disinfection, heat, especially in the form of boiling, is the most certain and best method of sterilisation, but we cannot do without chemical antiseptics for the disinfection of the skin, and of various articles such as marine sponges, which are of great use during the operation.

The *second point*—and it is one of the greatest importance—is to avoid soiling of instruments, hands, and consequently of the wound itself during the course of the operation. No doubt bacteria are constantly falling into the wound from the air during the operation, but it is well to diminish the number that may get in as much as possible, while it is important not to introduce masses of organisms, especially of pathogenic ones, as may be done if the hands of the operator touch surrounding objects which are not free from bacteria and are then put into the wound, or in many other ways which an observant surgeon will notice, but which are too numerous to mention. We must therefore so arrange matters that in the course of the operation there shall be as little chance as possible of accidental introduction of masses of bacteria into the wound, whether by the surgeon's hands or instruments, or in any other way.

The first thing that is done in order to diminish this risk is to surround the area of operation widely by aseptic cloths. About this point there seems to be no question in any of the plans adopted; the usual method is to cover the blankets, skin, &c., over a wide area in the vicinity with towels which have been sterilised by superheated steam. Personally, I prefer to sterilise the towels by boiling them. I think it is a much more certain way of carrying out the disinfection, especially when we see the small sterilising machines which are on the market at the present time and which are so much used, and realise that they cannot sterilise materials placed in them, especially when the latter are packed at all tightly. From the point of view, then, of complete sterilisation I much prefer to boil the towels; the only advantage of the dry towels is the question of keeping the patient dry, but as in any case mackintoshes are first applied over the surrounding area, the moisture of the towels need not penetrate to the patient.

Another objection which I have to *dry* sterilised towels is that dust is constantly falling on them during the course of an operation, and if the operation is a prolonged one a comparatively thick layer of dust may in course of time collect on the surface, and may be transported into the wound by instruments which have been laid on the towels or by the fingers of the operator. For this reason, after boiling the towels, I have them immersed in an antiseptic solution, usually 1 in 2000 corrosive sublimate, and the sublimate is not wrung out to any extent before spreading out the towels. The result is that any dust which falls on these towels comes in contact with an antiseptic solution, and as regards non-spore-bearing organisms such as the cocci, which are the chief enemies to be guarded against, disinfection

will probably occur very rapidly, while even in the case of spore-bearing organisms, it is quite possible that the spores may have their growth, at the very least, inhibited by the action of the antiseptic, so that the tissues may be able to dispose of them before they begin to grow. In the same way instruments laid down on the towels remain in contact with an antiseptic and are not so likely to become contaminated as if laid on dry cloths. For the same reason I prefer, instead of using dry sterilised linen overalls, to use a mackintosh apron, and to have fastened in front of it a piece of towelling which has been boiled and wrung out of 1 in 2000 sublimate solution. The insignificant amount of antiseptic which might get into the wound from these sources during the course of an operation could not possibly have the slightest effect; it would at once mingle with the blood and be precipitated and thereby rendered inert.

As regards the instruments, after being boiled they are very often placed in salt solution and left there during the course of the operation; in other cases they are kept in alcohol. As regards salt solution, the same thing applies, as I have already pointed out, with regard to dry towels. In the course of time, and not a very long time either, the surface of the salt solution becomes covered with floating dust, and an instrument taken out of it will carry with it a considerable amount of dust, which dust retains its vitality. At the same time as the operator picks out instruments he gets dust on his fingers, and while—as I have repeatedly pointed out—this dust is in the great majority of cases innocuous, it may not be so, and it introduces a possible loophole for infection. Hence, just as I have the towels moistened with an antiseptic solution, so I prefer to keep the instruments in an antiseptic solution till they are required for use, that which I use being 1 in 20 or 1 in 40 carbolic solution, which does not injure the metal. In that case the dust falling into the lotion becomes speedily acted upon and all dangerous organisms are rendered inert. I much prefer the carbolic lotion to alcohol, which is not an active antiseptic, and it is just as easy to rinse the antiseptic off the instruments after their removal from the lotion as it is to rinse the alcohol from them.

In a third point I would differ from the extremists in that instead of having only salt solution at hand during an operation, I have an antiseptic solution as well, such as 1 in 2000 sublimate solution, so that the fingers and instruments can be rinsed in it from time to time, and thus any accidental contamination got rid of. It always strikes me as if a surgeon voluntarily deprived himself of a very valuable aid to asepsis when he deliberately avoids having antiseptic solutions at hand during the course of an operation. I do not want the antiseptic solutions for the purpose of deluging the wound with them, but I do want them at hand to rinse my fingers in from time to time, to rinse away the blood from the instruments, and so forth, and for this purpose I always keep at my side a basin containing 1 in 2000 sublimate solution. As I have already said, the minute amount of antiseptic which will gain entrance to the wound as the result of these precautions is of no practical importance whatever, nor has it any injurious effect. In the case of operations on the peritoneum, joints, &c., I employ only saline solutions as soon as the peritoneum is opened, and I have it frequently changed so as to avoid the accumulation of dust on it, and when I wish to cleanse my hands I wash them first in the sublimate and then in the saline solution. I have repeatedly seen in watching operations under so-called aseptic conditions accidental infection of the hands and instruments of the surgeon occur without there being any possibility of removing that contamination owing to the absence of antiseptic solutions. I would point this out strongly as a loophole in the work of the extremists which is an unnecessary one and may lead to trouble.

Another point which has been the source of very considerable trouble to those who avoid the use of antiseptics has been the question of disinfecting ligatures, sutures, &c. As silk and material of that kind are easily enough disinfected by boiling the troubles which have arisen in connexion with deep sutures must, in my opinion, be explained by infection of the material during the course of the operation. This, as I have tried to point out, may quite readily occur where the use of antiseptic solutions is barred. Apparently the greatest difficulty has arisen in connexion with catgut, and to some the difficulty has seemed so great that they have practically abandoned the use of this material. This I think is a great pity. Personally I do not have any trouble with catgut, and I always use Lister's sulpho-chromic gut. As it comes from the instrument maker it is, of course, covered with bacteria. I do not think, however, that bacteria are present, at any rate in any numbers, in the substance of the catgut, because in the process of preparation the bacteria there must have been pretty thoroughly killed, but there is no doubt that on the surface there are any number of organisms. To those who believe only in boiling, or who are afraid of any antiseptic getting into the wound, the disinfection of the catgut presents the greatest difficulty, because boiling in water spoils catgut, however it is prepared. Hence, methods of sterilisation by boiling the catgut in various solutions have been introduced. It must be remembered, however, that Lister had in view other points besides the aseptic character of the material in his methods of preparing catgut, such as the strength of the knot, the length of time required for absorption and so forth. Of late, these points in the preparation of catgut seem to have been lost sight of, and the main question which has been considered has been how to sterilise it. As a matter of fact, I have never found any difficulty in sterilising catgut, nor have I seen any disadvantage from its use. I always keep the chromicised gut as obtained from the manufacturer in 1 in 20 carbolic solution for at least a week before using it, indeed, in order to make certain of its disinfection I place it in the first instance for a few hours in undiluted carbolic acid and then for at least a week in 1 in 20 carbolic solution. Before use I place it in weak sublimate solution so as to soak out the carbolic acid and I have never seen any reason to attribute any irritation of the wound to the minute amount of antiseptic which may be carried in with the catgut. As a matter of fact, my belief is that with catgut, as with silk, the real trouble is due to reinfection of the material during the operation and I think this is only another example of how the extremists handicap themselves by their fear of antiseptics.

Before going into the third question, there is one other point to which I wish to make reference—namely, the question of the drainage of wounds. Here, again, I think a retrograde step has been taken by many surgeons. There is no question that if one wishes to carry off fluid, especially if that fluid is thick as in the case of pus, an open tube is much better than capillary attraction. The drainage of wounds by capillary means was worked at a good deal in the early Listerian days, and with the view of avoiding changing of dressings for the purpose of removing tubes absorbable drainage-tubes were employed and also bundles of catgut and so on. The results were not particularly satisfactory and these methods did not take root. At the present time, judging from what is written and what one sees, the use of tubes has been given up to a great extent in favour of drainage by strips of gauze, for what reason I cannot imagine. I think it is a matter of practically no importance in the case of aseptic wounds, for the serum will escape quite readily by capillary drainage, the chief trouble being that if much blood is poured out, the gauze drain is apt to be imperfect as compared with the tube. But where I think the use of capillary drainage is a disadvantage as compared with tubes, is in the treatment of abscesses. Apparently the popular method of dealing with abscesses at the present time is either to pack them with gauze, or at any rate to insert strips of gauze to act as drains, and certainly in the case of sinuses one constantly sees strips of gauze used instead of drainage tubes. Now there are two objections to this; in the first place, gauze will not drain pus properly, and the result is that accumulation is apt to take place behind the gauze plug, and it is quite a common thing to see on pulling out a plug of gauze, that some pus runs out which has really been prevented from escaping by the gauze which had acted as a plug instead of as a drain. The result is that one very often fails to obtain the beautiful result noted by Lister—namely, that if an acute abscess is opened and properly drained and if fresh bacteria are prevented from entering from outside there is no further pus formation. At the present time continued suppuration from an abscess seems to be looked on as a normal state of matters till the abscess cavity closes. In sinuses I think gauze drains are especially bad, because not only do they cork the wound and prevent the escape of the discharge, but, becoming soaked

ith infective material, they act as irritants and are really othing more or less than the old setons. I would, therefore, rongly beg for a reconsideration of this question of drain- ge and for the resumption of drainage by tubes instead of auze, certainly in all cases where sepsis is present. I have epeatedly seen cases of intractable sinuses where all that as required to obtain healing was to leave out the gauze lug and keep the orifice of the sinus open for a few days by eans of a small drainage-tube.

Coming now to the *third point*, viz., the question of pre- enting infection of the wound after the operation is com- leted, I think that we have here the most important ifference between the extremists and the Listerian school. ister from the first pointed out that an essential part of the reatment was to prevent the possibility of infection of the ound after the completion of the operation. Now infection f the wound after the operation takes place by the growth f bacteria in the blood and serum after they escape from the ound and in the dead epithelium on the surface of the skin, nd their subsequent penetration into the wound along stitch acks, drainage openings, &c. With the view of avoiding his growth, Lister arranged that the discharges from the ound should be received into dressings which contain an ntiseptic in such amount that when dissolved by the dis- harge it will render the latter an unsuitable soil for the rowth of bacteria. As was pointed out in a paper read y Lister at the Medical Society of London some years ago, is not necessary that the amount of antiseptic thus com- unicated to the discharge should be very great. All that is anted is to add enough antiseptic to the discharge to hibit the growth of bacteria, not to produce a solution rong enough to kill them; and by following that principle is not necessary to put on dressings containing antiseptics f a character or in sufficient amount to irritate the skin. It true that some skins are more irritable than others, and hat a rash may occur in some cases under a very mild anti- ptic dressing, but with the antiseptics which are now used his is of comparatively rare occurrence, and where necessary an be avoided by placing a layer of plain sterilised gauze ext the skin beneath the antiseptic dressing. It may be oted that in any case the antiseptic in the dressing does not et into the wound; it is merely placed there with the bject of preventing bacteria growing in the discharge and eaching the wound.

Nowadays surgeons are using to a large extent dressings hich have been heated and which no doubt in many cases re really sterile, but which do not contain any antiseptic. n passing I may remark that the sterility of these dressings s by no means certain in all cases, for one has only to look t the small machines which are often used in private work, nd the way in which dressings are tightly packed into them, o realise that no proper sterilisation can have taken place. The action of such a dressing is merely that of a filter against he dust of the air, just like the plug of wool in a cultiva- ion tube. The discharge soaks into the dressing, and till t comes near the surface of the dressing it may remain terile. That, however, will only be the case if the skin as been really thoroughly sterilised and if no bacteria have fallen on the skin or the dressings before they are pplied. But, in any case, as soon as the discharge reaches he surface of the dressing bacteria will grow in it and apidly spread through it and reach the wound, unless, ndeed, the blood has in the meantime become so concen- rated by drying that it is no longer a suitable cultivating edium.

When we reflect that an organism dividing three times an our, which is a fair average, will give rise to something like 3 million bacteria in 12 hours one can have some idea how uickly the organisms may reach a wound once the discharge as come to the surface of a plain sterilised dressing. Although no doubt after 24 or 48 hours these bacteria can no onger penetrate into the wound and cause deep-seated trouble hey may quite well spread along the stitches and give rise to he stitch abscesses, which seem to be not at all uncommon in he practice of surgeons who use these dressings. These stitch bscesses have, in my opinion, been erroneously attributed o imperfect sterilisation of the stitch material or to im- perfect disinfection of the skin. I say erroneously because, sing antiseptic dressings, I have practically no experience of them, and the conclusion which follows from that fact is hat it is from the want of antiseptic in the dressings and he consequent growth of bacteria rather than from the other causes mentioned that these stitch troubles arise. To carry out the purpose of this dressing a large mass must be put on, and not the small pieces that one so often sees used. If it fails in its object it does harm instead of good, for it interferes with the drying up of the discharge and, keeping it warm and moist, favours the development of bacteria in it. This plan was tested long ago by Lister and was given up as being unsatisfactory.

If I were to go over to the extreme party and abandon the use of antiseptics—which I have no intention of doing—I should not apply any dressing to the wound at all. If the wound is left open and protected from direct contact with septic materials the blood and serum which ooze out in the first instance will very soon dry up and form a scab which will prevent infection of the interior, and if I were dressing wounds in that way I should build up a mass of aseptic dressings on each side of the wound and then fix a thin layer of wool or gauze over the surface, but not touching the wound, so as to protect it from dust. Where wounds can be completely closed from end to end I think the great majority would do perfectly well if treated in this way, and probably better than if covered with plain sterilised dressings, but where drainage has to be provided, as is, of course, the case in some operations, such as in some extensive breast operations in fat people, in draining joints, &c., the problem is different, and there I think that it is essential that the dressing should contain some antiseptic if one wishes to be certain of the result.

To sum up the criticism which I have to make on the most recent ideas on the treatment of wounds, it is that the pendulum has swung too far in the direction of the avoid- ance of antiseptics, and that the reasonable use of all the means at our disposal for securing ascepticity of wounds will furnish more constant results. The chief point to which I take exception is the employment of dressings which do not contain an antiseptic in sufficient amount to render the dis- charges which flow through them unsuitable for the growth of bacteria. And a second point which I also think is very important is the absence of antiseptic solutions during the operation in which hands, instruments, &c., may be washed from time to time to insure a continued asepsis. A third point which I think is a retrograde step is the substitution of gauze plugs for drainage-tubes, more especially for the drainage of abscesses and sinuses. Minor points are the use of swabs instead of marine sponges and the avoidance of catgut. This extreme view has, however, done good, especially in the way of directing attention to the value of heat as a dis- infectant for various purposes in connexion with operations. There is no doubt that the sterilisation of instruments, towels, &c., by boiling and of dressings by a current of superheated steam adds very distinctly to the certainty of the results. It has also done good by calling attention to the importance of diminishing the amount of dust which may get into wounds at the time of the operation, although some of these precautions have been given an importance which they do not deserve.

It always seems to me—and I say this from a large experience in bacteriological work—that the attempt to treat wounds without any antiseptics is a very unnecessary complication. In the first place, it is ever so much more difficult to secure asepticity of a wound under such circum- stances than if one takes advantage of antiseptics, and in the second place it requires a man who is especially skilled and experienced in bacteriological work to bear in mind the various loopholes which have to be guarded against in order to obtain a constant aseptic result. I say that bacteriological experience is necessary because the surgeon has to concentrate his attention on the object of the operation rather than on the aseptic technique, and in order to carry out the object of the operation satisfactorily and at the same time without the risk of sepsis the aseptic technique must be practically automatic. Therefore, if he has to be thinking all the time not only of the object of his operation but of the various loopholes which may arise and which he must most carefully avoid, seeing that he has no antiseptic materials at hand with which to rectify mistakes, one or other point must suffer; either his operation may not be carried out as he would desire it or his aseptic technique is apt to be faulty. I confess that I can see no reason for this great dread of a drop of antiseptic material getting into the wound; I can

PRINT IN BINDING

only say that my own results, and those of surgeons who use antiseptics judiciously, are in every way as good as those obtained with the more elaborate aseptic precautions; in fact, seeing that we are not troubled with sepsis or stitch abscess at all I venture to assert that they are better, because they are more constant and dependable.

FURTHER OBSERVATIONS ON THE TREATMENT OF GOUT BY THYMINIC ACID.

BY ROBERT FENNER, L.R.C.P. EDIN., M.R.C.S. ENG.

IN a paper communicated to THE LANCET[1] I drew attention to the fact that the synthetic manufacture of thyminic acid was an accomplished fact and I gave a table of cases in which it had been exhibited with marked success. If I should appear to attach undue importance to the value of this drug in the treatment of the gouty symptoms it is because I have proved it efficacious in a large number of cases which have yielded to no other treatment. The exhibition of thyminic acid for the elimination of uric acid has its support on such a scientific basis that it is lifted above the stigma of empiricism.

The nitrogenous foods oxidised in the process of digestion may be divided into proteins, paranucleins, and nucleins; of these it is only the nucleins that produce uric acid by splitting up and forming nucleic acid and the purin bases. The purin bases are xanthin, hypoxanthin, guanin, adenin, &c., and it is only in the presence, and by the oxidation, of these that uric acid is produced normally. At the same time, and as a result of the same process, thyminic acid also is formed. Kossel and Minkowski have shown that uric acid will combine and form a compound with thyminic acid. By no process known to chemists can the uric acid be detected when once this compound is formed; it loses its identity and can no longer be precipitated. It is as a constituent of this compound that uric acid circulates in normal blood. We know that it must be present there, yet it cannot be detected; it is its precipitability and not simply its presence in the blood which occurs in gout. The amount of uric acid contained in gouty blood may not exceed the normal, but it tends to be precipitated and we may fairly conclude that this tendency is owing to the fact that its combination with thyminic acid has not taken place or has become unstable. If we could discover why this combination of uric acid and thyminic acid has not occurred, an important advance in the knowledge of the pathogenesis of gout would result. Schmoll says: "There are two possibilities (1) uric acid is formed 'normally,' i.e., by oxidation of the purin bases, but is for some reason not combined with thyminic acid; (2) uric acid is formed synthetically and not by oxidation." Following up the researches of Minkowski and Wiener, he contends that synthetic production of uric acid actually occurs in gout. By treating a series of gouty cases with thyminic acid Schmoll further proved that the free uric acid in the blood had not lost its power to form a compound with thyminic acid.

Thus we see that in gout the uric acid produced by the oxidation of the purin bases can combine naturally with thyminic acid and in this combination passes out of the system, whilst the uric acid of synthetic production has not the amount of thyminic acid at hand necessary for its combination, and this clearly explains why its presence can be detected in the serum. It is therefore this synthesised uric acid deprived of the chance of combining with thyminic acid which is present, and, by its saturation in the serum, becomes precipitated and deposited in the joints and tissues. Again, if the uric acid derived from the oxidised purins be prevented by any cause from combining with the thyminic acid, which comes from the same source, we also have free uric acid in the system. It is well known that in pneumonia, during the absorption of the exudate in the lungs, uric acid is in evidence. Müller demonstrated that the absorption of the inflammatory products takes place by autolysis. During this process the nuclein is split up into the purin bases but the thyminic acid is decomposed (Schmoll); therefore the uric acid has no thyminic acid with which to combine. Thus again in nephritis, the compound of uric acid and thyminic acid is split up in the kidneys and uric acid becomes precipitable in the urine. In the case of the administration of the thymus gland, which contains a large amount of uncombined purin bases, these, absorbed without the complementary thyminic acid, yield precipitable uric acid.

In the gouty state we see that the molecules of uric acid are built up and automatically pieced together, and this synthetically formed and complex molecule is found in the blood and tissues. If, then, thyminic acid can be introduced into the blood by ingestion or other method in sufficient quantities to retain the free uric acid in circulation, the method of rendering the latter soluble is found. Schmoll has conclusively proved that thyminic acid taken by this method passes into the blood stream unaltered. The nitrogen output gradually increases, reaches its maximum, and decreases as the gouty attack diminishes. The thyminic acid, meeting with the uric acid, has formed the requisite combination, biurate of sodium is no longer precipitated, and the uric acid passes out of the system.

It is not within the scope of this paper to discuss the etiology of gout in detail, but it is salutary to insist upon the fact that in a vast number of cases the gouty condition is engendered and maintained by quite preventable causes. It is quite time that heredity and high living were relegated to the list of merely predisposing causes. A very large number of people suffer with gout whose habits and mode of living are so carefully regulated that they do not deserve to be so afflicted. Hunting men and men who get regular and sufficient exercise, men like navvies and labourers who earn their living by the sweat of the brow, suffer to a greater extent than is usually believed. I have seen a number of patients whose dietary has been reduced to the vanishing-point, to whom wine has been denied, who have been dosed and depleted, whose holidays have been spent in mud and salt baths and water-drinking bouts, whose lives have become almost unbearable, but whom a little observation and common sense would have cured. By all means let us enjoin moderation in all things, but at the same time let us be sure that we have discovered the cause of our patient's troubles. Over and over again I have found the gums of patients who have been treated for gout reeking with the pus of pyorrhœa alveolaris. I have before me a series of 78 cases, in 66 of which I have found this trouble. I have been astonished at the manner in which this has been overlooked by doctors and dentists alike. It is difficult to cure and often necessitates the removal of many of the apparently good teeth. Many dentists seem disinclined to take the trouble and so the auto-infection goes steadily on—recurrent attacks of gout occur, and the patient gets disheartened and flies to quack remedies and nostrums. Such are many of the cases that come to me and complain that the treatment they have been ordered has not benefited them. Since I have come to regard gout as of purely toxic origin and have carefully sought for and often found the cause, my results have been more than gratifying. Let us, therefore, seek for evident causes in the treatment of the gouty state. The mouth, throat, and nasal cavities should be carefully examined for local diseases. Evidences of intestinal fermentation or putrefaction should be carefully noted. In these days of rush and the struggle to live, mental worry and overstrain are responsible for a large number of acute and subacute attacks. Attacks of acute lumbago and sciatica are as common among business men who have little opportunity for exercise as among hunting and golfing men who are probably more free from the depression resulting from bad times and the stress of competition.

At the present time a fierce battle is raging over the pathogenesis of gout. The generally accepted belief that uric acid *per se* is the guilty factor has apparently received its death-blow at the hands of such eminent authorities as Walker Hall, Chalmers Watson, Woods, Murchison, Sir Dyce Duckworth, and Luff. The first-named authority says: "As an etiological entity uric acid must be definitely discarded." Luff says: "For my part I have ceased to regard uric acid as in any sense a poison."[2] Sir W. Roberts says: "There is complete absence of direct experimental proof

[1] Uric Acid: A Rational Treatment for its Elimination in the Light of Recent Research, THE LANCET, July 1st, 1905, p. 19.

[2] Transactions of the Medical Society of London, vol. xxx., p. 73.

that uric acid is poisonous."[3] Other writers support the microbic origin of gout, whilst Sir Lauder Brunton is inclined to agree with Luff, "that the poison of gout might not be uric acid, but probably it was a substance allied to uric acid and probably a derivative of purin."[4] The only evidence of the bacterial theory of gout is that adequate clearage of the intestinal contents diminishes the gouty symptoms.

Nor must we forget the all-important part played by the liver in the "metabolic commerce," as Sir Lauder Brunton so aptly puts it. Little or no consideration is at present paid by many people to the transformations which uric acid undergoes in the body, although these are quite as well marked as those of sugar, and affected to a great extent by the same organ—viz., the liver.

Whether uric acid is or is not toxic in itself is to my mind rather beside the question. What we know is that the presence of free uric acid in the blood is synchronous with an attack of gout, so much so that the uric acid and the gouty state have been considered synonymous terms. Now it is by no means necessary to assume that it is the cause of gout any more than that sugar in the urine is the cause of diabetes. Both pc. -to a disturbance of metabolism and our treatment must be symptomatic until the true etiology has been discovered. The fact that uric acid is free means that the blood is abnormal and we know that the slightest variation from the normal may work for ill in manifold ways. Perhaps the phagocytes or antibodies are unable to work in this altered medium against the toxins which are the probable starting cause.

Important as it is to endeavour to find the actual cause of gout and to place our patients under those conditions best calculated to ward off a continuance of the attacks, it is more within the scope of this article to give some indications of treatment when the transformation of uric acid has actually occurred and deposition has taken place in the system. There is little doubt that the old-fashioned attack of gout endured by our forefathers is rarer nowadays. I think this may be explained by the fact that we live more carefully and take more exercise. Beer and heavy wines have given place to spirits, mineral waters, and the lighter wines. Meals, though perhaps more varied, are not so heavy. We now eat lighter dishes and more of them. But are we of this generation the gainers? Though our ancestors had their gouty attacks, they generally lived to a good old age. It is a serious question whether our business worries and the struggle for existence, our habits of late hours, whisky drinking, and excessive smoking, are not taking their toll in heart, liver, kidney, and nerve troubles, leading to defective metabolism and the production of the toxins and ferments they bring in their train. The gouty state of to-day is undoubtedly different from the gout of fifty years ago; less acute, but more insidious, more lasting, and more serious in its ultimate result upon health and strength. We have present in the blood a substance which lacks the requisite quantity of thyminic acid to be rendered inert. Having, therefore, discovered and removed, to the best of our ability, any possible cause, we must endeavour to relieve its mischievous effects by limiting its further production and preventing its deposition as a salt in the tissues.

The hygienic, dietetic, and therapeutic considerations in the prevention and treatment of gout should be carefully studied in every case. It is as irrational to feed every patient on nuts and vegetables as on underdone meat and port wine. "What is one man's meat is another man's poison" is an old adage that is remarkably true in the dietetic treatment of gout. The broad lines to work upon are a sufficiency of simple, wholesome, and well-cooked foods of mixed character (avoiding in acute cases the exhibition of those containing an excess of purins), efficient mastication, ample time for meals, and the avoidance during the same of the ingestion of soups and large potations. The amount of sugar and starch should be reduced to a minimum. It ought also to be remembered that salt, which so readily yields up its sodium, should be very sparingly taken. The question of a suitable beverage and its amount is a subject which exercises the mind of every patient one sees. It is quite impossible to draw a hard-and-fast line for every case. Alcohol in any form acts as a poison to some and it may certainly be quite advisable to order it to others. Some patients will not endure the total abstinence from what they look upon as a creature comfort, and in such cases fall back upon our judgment as to what is least harmful. The patient's own observations as to what kind of wine suits him is usually to be relied upon, but the quantity is another matter. "A glass or two" of port or champagne may mean anything up to a bottle, and I am convinced that spirits, wine, or malt liquors taken in any other than small quantities are as guilty as, if not more so than, food in producing evil in the digestive organs. I place spirits first advisedly, because, in my opinion, the profession has supported and maintained the extraordinary fetish of the "whisky and soda" of the present day. It is quite time the public were educated to the fact that a raw spirit, the flavour of which comes from the sherry cask, diluted with mineral water, is far from being a harmless beverage. It can do no good and often does an infinitude of harm. It has certainly done much to destroy the taste of the British public for pure light wines, as the majority of these now sold in England to suit the vitiated palate of the people are pasteurised or loaded, and are badly borne by the gouty. Perfectly pure and sound clarets and moselles are cheap and easily procurable, and little or no harm results from their consumption. An abundance of plain non-irritating fluid during the day is very advisable, and the natural waters of Vichy, Godes Berger, or Contrexéville are excellent. I have been particularly pleased with the results obtained by ordering a pint of skimmed milk in the early morning and the same amount at breakfast. It must be borne in mind that probably better results might follow the exhibition of butter-milk curdled by and containing growths of lactic acid bacteria.[5] Caffeine, the active principle of coffee and tea, is closely allied to uric acid in their organic equivalents (uric acid $C_5H_4N_4O_3$, caffeine $C_8HN_4O_2$) and should be avoided or sparingly consumed. Regular exercise, not spasmodic bursts of activity, is essential. I have often seen an attack of gout, sciatica, or lumbago following a day's hard hunting, when the heart and muscles are not tuned up to endure the strain. The business man living a sedentary, worrying life all the week ends up on Saturday and Sunday with three or four rounds of golf, and a painful elbow or shoulder lasting many weeks is the result. It is next to useless to advise our patients in these days to avoid mental worry and disquietude, and I have been particularly struck with the number of cases that have come to me where business worry is the sole predisposing cause.

The palliative remedies in vogue for the treatment of gout are many and varied. They may be classed under four heads: (1) the so-called uric acid solvents; (2) alteratives; (3) salicylates or their derivatives; and (4) alkalies.

1. During the past ten years a variety of so-called uric acid solvents have come within our reach—salts of lithia, phosphate of sodium, piperazine, pyridine, lysidine, lycetol, citarin, guaiacolate of piperidin, urotropine, uricedin, and urosin. Their action is the supposititious one of rendering soluble the biurate of sodium within the body, but in the absence of any proof that such solution is produced one must remain a sceptic as to their having any action in the elimination of uric acid or its derivatives. I am convinced that to depend upon the so-called uric acid solvent is to lean upon a broken reed. They play no possible part in holding uric acid in solution or preventing the formation of the biurate of sodium. Many irritate the mucous lining of the stomach and intestines and nearly all are depressing in their action.

2. Under the heading of alteratives we have the drugs colchicum, guaiacum, arsenic, and iodide of potassium, each valuable in its own sphere but with no reason for the results, good or bad, that sometimes follow their use. Colchicum has an undoubted action in checking the symptoms of acute gout, especially after the exhibition of a smart mercurial purge. But in the insidious and in the more subacute forms this drug is worse than useless, is a cardiac depressant, and is often badly borne.

3. Another group are the salicylic acid derivatives, salicylate of sodium, aspirin, &c., which undoubtedly possess valuable properties in the rheumatoid form of gout. In many forms the salicylic acid derivatives, especially aspirin, salol, and salicylate of sodium, have a marked beneficial effect, and Sir Lauder Brunton has pointed out the very valuable combination of salicylate of sodium and bromide of potassium in the

[3] Albutt's System of Medicine, vol. iii., p. 155 et seq.
[4] Transactions of the Medical Society of London, vol. xxx., p. 75.
[5] Brit. Med. Jour., Sept. 19th, p. 847.

irritable condition so often associated with the gouty state. I have been very gratified to note the marked relief this combination has given to many of my patients. But salicylic acid and its derivatives have no marked or lasting effect for good and are only useful as aids in the treatment of symptoms.

4. The alkaline treatment consists of the administration of the salts of potash, soda, or lithia. It has been pointed out that a large dose of bicarbonate of potassium at bedtime stems "the acid tide," and this may be true as regards the "initial acidity" and merely applies to the stomach. It can have no effect upon the "uric acid tide," to develop later. The treatment of gout by alkalies is carried out nowadays entirely by the action of the waters of the various natural springs. All forms of mineral waters are beneficial but mainly owing to the good effect of their largest constituent—viz., water.

Sir W. Roberts claims to have shown conclusively that alkalies are useless and have no influence whatever on the sodium biurate. "The sodium salts are particularly harmful, and yet the gouty from all parts of the world are sent to those very continental springs in which these salts predominate. *The efficacy in the treatment is in the water* [the italics are mine], the method of imbibing it, the regulated and modified diet, the observance of proper hours, exercise, and absence of worry with its corresponding peace of mind."[6] One is not surprised, therefore, to find that so many of one's patients work up an acute attack of gout during the treatment at these spas or immediately on their return. It is poor comfort to be told by the physician that "this is to be looked for," to which is added a real grain of comfort that "this gouty storm is but a flash in the pan and that great and lasting improvement will follow."

Dr. Labbé in "La Diathèse Urique" gives a most interesting description of the action and uses of these various drugs. After describing their chemical properties, he writes: "There are a great number of chemical combinations which have the property of dissolving and retaining in solution considerable quantities of uric acid as compared with their own weight. Of these not one can be said to be 'physiological.' All these substances are absolutely foreign to the organism *and as such cannot be used for a long time or in great quantities with impunity* [the italics are mine]. Further, if their dissolving power has been proved and measured *in vitro* it has not been demonstrated that *in vivo* the complex combinations in which they may be called upon to act do not modify and render inert their therapeutical properties. It is this point of view which has caused certain authors to seek the possible existence of physiological combinations formed by the union of uric acid with certain compounds existent or pre-existent in the organism. The theory of the constant circulation of uric acid in the organism under the form of a combination which is permanent and not precipitable in acid with the substance *thyminic acid* or nucleotin-phosphoric acid has been discussed elsewhere." (Ibid., p. 15.)[7]

For the past five years I have treated a very large number of cases of gout and kindred affections, and have made a careful study of the effects produced by the administration of thyminic acid. I should like to preface my remarks with a word of warning: thyminic acid is not, and never can be, a panacea for each and every variety of the gouty state. My observations, however, lead me to claim for thyminic acid the power of preventing the formation of free uric acid in the serum and its deposition in the tissues and joints. In my former paper I showed that thyminic acid had an enormous advantage over any of the so-called solvents in its retentive power for uric acid, that all tests were valueless in detecting the presence of uric acid when combined with its desideratum of thyminic acid, and that its exhibition has proved of the greatest service in the treatment of cases which had resisted all ordinary drugs. Thyminic acid may be given in the compressed tablet form or in powder. The first form is the most convenient, the taste is not unpleasant, and to secure rapid absorption the tablets may be masticated. Careful observation has proved that my former dose of 12 grains per diem may with advantage be increased to 24 grains—that is, a dose of eight grains after the three principal meals. Given in this way there are absolutely no unpleasant effects, and in my own practice and in that of many hundreds practising in the United Kingdom and abroad practically none have been produced after a long use of this drug. Those that have been recorded appear to have been due to some idiosyncrasy of the patient. It has certainly no deleterious action on the heart, the digestion, or the secretive organs. Not a single patient has complained of any depression; on the contrary, its action is distinctly tonic, due probably to the phosphoric acid it contains and to the rapid amelioration of the gouty symptoms. At the beginning of the treatment patients have occasionally complained of some fugitive pains in the lumbar region and in the various joints, but these quickly subside under the continued use of the drug. In acute cases I find that a larger dose should be given and I often combine with it, in a cachet, colchicum or aspirin. From eight to ten grains may advantageously be given every four hours. In chronic cases of the arthritic variety, where more or less permanent injury has occurred in the joints, a smaller dose of four grains should be taken over a prolonged period, and it is in these cases, contrary to one's expectation and in those troublesome forms of irregular gout, that thyminic acid gives very gratifying results. As regards general treatment in acute cases I forbid from the very outset all purin-containing foods. Large quantities of milk and Vichy water or skimmed milk and vegetable soups with well-cooked toast should be given, and if rapid loss of strength occurs chicken and veal broth and light milk puddings. The swollen joint should be placed in an electric-ray light bath and the temperature gradually raised until the thermometer registers from 200° to 240° F. At this heat gentle local diaphoresis occurs. The part may then be bathed in a hot alkaline solution or immersed in an alkaline bath, carefully dried, and protected from the weight of the bed-clothes. If the patient is sitting up the part should be raised and a light medicated wool dressing applied and lightly bandaged. I seldom apply outward applications during this stage; I find they are practically useless. This proceeding may be repeated at intervals of six hours and the symptoms gradually subside. When the swelling has subsided gentle massage of the muscles and tendons may be commenced, but all movement of the joints should be forbidden. This word of caution is necessary, as the highly-trained masseur of to-day is always anxious to perform gymnastics with joints when given the opportunity. The dose of thyminic acid may be reduced to 24 grains a day as the pain and swelling subside, and continued for some three or four weeks, and then again reduced to 12 grains per diem.

In attacks of acute sciatica and lumbago I find nothing so efficacious locally as the application of the high-frequency current in the form of the effleuve and massage with the vacuum glass electrode. The first vigorous application greatly lessens the pain and frequently allays it, while usually two or three applications are sufficient to bring about a cure. In some cases I find that thyminic acid administered by the mouth is unable to effect a sufficiently rapid cure, but in the chronic forms it is of the greatest service in mitigating pain and loss of muscular power which are the chief symptoms. It has also a very marked effect in entirely preventing or in greatly lengthening the period between the attacks in those who suffer from recurrent sciatica or lumbago.

A very valuable help in the treatment of all gouty cases is the ray light bath which can now easily be procured at a reasonable price and may be lighted from the ordinary electric plug from the main. A temperature of from 130° to 140° F. is generally sufficient and adequate diaphoresis obtained in from 15 to 18 minutes. If followed by a warm or tepid bath and brisk towelling it is most beneficial and invigorating. This may be taken two or three times a week and in the local treatment of joints nothing is more soothing and beneficial in the relief it gives to pain and swelling.

I have had prepared a sterilised solution of thyminic acid equivalent to two grains of the powder for intramuscular injection and carefully conducted experiments on rabbits and guinea-pigs proved that the injection was well borne and harmless. I was then fortunately able to test its efficacy on myself. The pain that I had suffered for three weeks, probably owing to some deposition within the joint, with resulting neuritis of the musculo-spiral nerve, was very greatly lessened by one intramuscular injection into my shoulder. Another injection on the following day completely removed the symptoms and I have been free since. A professional brother also allowed

[6] Croonian lecture, 1892.
[7] Translated.

me to inject him for lumbago, and here again the result was most satisfactory. I have given it with equally good results in four other cases, three of sciatica and one of neuritis of the ulnar nerve. In none of these did any unpleasant results follow except the usual numbing pain, quickly passing off, which follows any intra-muscular injection other than cocaine or morphine. Taking into consideration the chemical affinity of thyminic acid it is legitimate to assume that its local action would greatly lessen the deposition of the biurate of sodium upon the inflamed tissue or joint. I have since had sterilised tubes prepared by Messrs. Allen and Hanburys, containing two grains of thyminic acid and one-quarter grain of novocain, and find that the addition of the latter greatly mitigates the after pain of the injection. It is, of course, premature with so few cases to dogmatise upon its favourable action in this form, but it is natural to feel somewhat sanguine that its extended use may be equally successful. If this be the case a very valuable means of local treatment for these distressing symptoms will be within our reach.

Turning to the clinical results of the treatment of the gouty state by thyminic acid, I am convinced that we possess a very valuable and powerful agent, especially in the prevention of recurrent attacks of acute gout and in the cure or amelioration of the more chronic forms, and of those many ailments that we know now are marked by the excessive formation of uric acid within the system. It is in the prevention of attacks of acute gout, in the obesity so often allied with the gouty state, in gouty eczema, asthma, glycosuria, and stomachic derangements that thyminic acid attains its maximum of usefulness. A small dose (4 grains) taken daily after meals for a prolonged period, say of three months, and then every alternate week, will in most cases entirely avert the onset of acute symptoms, and I have a record of many patients who for the past three or four years have entirely escaped attacks that were formerly of constant occurrence.

When an acute attack of arthritic gout is actually in evidence I must confess that the action of thyminic acid has not been invariably successful, and I prescribe mercurials and a few doses of colchicum or colchicine with aspirin; then as the symptoms defervesce I order somewhat large doses of thyminic acid in conjunction with local treatment by the ray light bath, and the pain and swelling quickly subside.

Many of my patients who have broken their sequence of gouty attacks and have become free from even minor symptoms have discovered the efficacy of a few four-grain tablets of thyminic acid in obviating the evil effects of occasional indulgence in the pleasures of the table, for many people suffer acutely the day following a lapse from the prescribed regimen. Even a glass or two of champagne or port or alcohol of any kind will often cause great discomfort. Although I deprecate these lapses, yet it is consoling to note that a means to avert evil consequences is at hand. It is a decided proof of the efficacy of the drug that it renders inert any excess of uric acid which in some peculiar way alcohol in any form often produces. I have often been asked how many grains ought to be taken to obviate the ill-effects of some gargantuan banquet to which my patient has been invited. This question is as impossible to answer as it is sadly subversive of dietetic discipline.

During the past five years I have kept a careful record of the gouty cases that I have treated with thyminic acid. In my preceding remarks I have made it clear that the most striking results have been obtained in those who suffer from the more subacute and chronic varieties, whether connected with joints, tendons, muscles, skin, or nerves. The greatest benefit has also accrued to that very large class of cases where the apparent trouble is of gastric, hepatic, or intestinal origin. In obesity, which so often accompanies and is often the only symptom of the gouty state, the results are most gratifying. A gradual reduction of weight occurs without loss of strength. Nor need the patient be starved or nauseated by incongruous foods. In acute cases where we have to deal with an inflamed joint and accompanying pyrexia it is as well to combine the thyminic acid with colchicum or aspirin until the acute stage is passed. The days or weeks of intense depression, irritability, and want of energy so often observed are shortened by its continued administration and a recurrence of the attack averted.

In my former paper I gave a description of some cases I had up to that time treated with thyminic acid. Since then the treatment has been equally successful and many professional men have communicated to me the excellent results obtained by them. It would be a heavy task to give details of every case and invidious to select a few. I append an analysis of cases taken at random which I have divided into (1) acute and (2) subacute.

1.—*Cases of Acute Gout.*

CASE 1.—A man, aged 62 years. Previous history: Had repeated attacks of acute gout in the feet and knees up to five years ago when he began to take thyminic acid; was free from symptoms until last autumn, four weeks after returning from a course at Aix-les-Bains. Present attack (Oct. 2nd, 1908): Began suddenly in left great toe and spread rapidly along sheaths of tendons and involved knee; three days afterwards the right toe also was swollen and tender. Treatment: 8 grains thyminic acid every four hours; ray light bath to feet. Colchicine was also given for 48 hours. Remarks: There was rapid improvement; in nine days the attacks had passed off. He did not "take a course" this year and has been free since.

CASE 2.—A man, aged 59 years. Previous history: A parkkeeper; had always enjoyed good health. Present attack (July 20th, 1908): Acute sciatica had developed in right leg 14 days before; had tried the usual remedies; quite incapacitated for work. Treatment: Two intramuscular injections of thyminic acid followed by 24 grains in tablets daily. Remarks: Relieved after first injection; cured after second. Has been well since.

CASE 3.—A man, aged 33 years. Previous history: Has had four attacks of acute gout, three in the feet, one in the right knee; usually incapacitated for three weeks. Present attack (May 9th, 1907): Typical attack in right knee; greatly swollen; very painful. Treatment: 8 grains thyminic acid every four hours, with colchicine the first 24 hours; ray light bath twice daily to knee. Remarks: The swelling and pain quickly subsided and had disappeared by the ninth day. Regularly takes thyminic acid and has been well since.

CASE 4.—A man, aged 44 years. Previous history: Had never previously had an acute attack but had several subacute attacks of lumbago and gastric catarrh. Present attack (April, 1907): Acute pharyngitis with glossitis; pyrexia. Treatment: 8 grains thyminic acid every four hours with colchisal. Remarks: Relief quickly followed and he was well on the fourth day. He has since taken 4 grains thyminic acid three times a day and has enjoyed good health.

CASE 5.—A man, aged 48 years. Previous history: Has passed large quantities of "gravel" for some years and has had repeated attacks of acute gout. Present attack (Feb. 10th, 1908): Acute arthritic attack of right ankle and joints of the foot and toes. Treatment: 8 grains thyminic acid every four hours; ray light bath locally; occasional doses of colchicine. Thyminic acid was continued in 8-grain doses. Remarks: The acute symptoms subsided in five days, the foot remaining swollen for three weeks. The "gravel" continually reappears but lessens or disappears entirely when the thyminic acid is resumed.

CASE 6.—A man, aged 43 years. Previous history: Has had several previous attacks. Present attack (October, 1907): Acute attack in right toe with gouty inflammation of the foot tendons and the tendo Achillis. Treatment: Thyminic acid and colchicine and ray light baths. Remarks: The inflammatory symptoms rapidly subsided; well on fifth day. Continued taking thyminic acid and has been well since.

II.—*Cases of Subacute Gout.*

CASE 1.—A man, aged 50 years. Previous history: Had previously had sciatica and various minor symptoms of the gouty state; careless as regards diet and alcohol; tophi and enlarged finger joints. Present attack (Feb. 8th, 1908): Neuritis of the shoulder, arm, and hand; loss of power; pain and wasting of muscles. Treatment: Thyminic acid in 8 grain doses; high-frequency electricity. Remarks: The symptoms gradually improved and in three weeks a complete cure had resulted. Thyminic acid continued for three months; has been well since.

CASE 2.—A man, aged 47 years. Previous history: Had previously had herpes zoster preputialis. Present attack (May 8th, 1908): Neuritis, shoulder to elbow, lasting three weeks. Treatment: Intramuscular injections of thyminic acid = 2 grains. Remarks: Two were given with complete success.

CASE 3.—A man, aged 46 years. Previous history: A "gouty" subject; a sufferer from "acquired gout." Present attack: Lumbago lasting 14 days. Treatment: Intramuscular injections of thyminic acid = 2 grains. Remarks: Two injections gave permanent relief.

CASE 4.—A man, aged 60 years. Previous history: A sufferer from acquired gout of 10 years' duration, generally attacking feet and legs; glycosuria; albuminuria. Treatment: Has taken thyminic acid with intervals for two and a half years. Remarks: Is now quite free from symptoms; glycosuria quite disappeared; small trace of albumin. Can walk and take exercise freely.

CASE 5.—A man, aged 42 years. Previous history: A somewhat careless liver, probably inherited gout; obese; height, 5 feet 9 inches. Present attack: Sept. 15th, 1907; weight, 16 stones 12 pounds. May 5th, 1908; weight, 13 stones 7 pounds. Treatment: Thyminic acid ordered in doses of 8 grains thrice daily. Remarks: Continues well in health; hunts regularly.

CASE 6.—A man, aged 62 years. Previous history: Had been a martyr to gout; at Droitwich, where he was "taking a course" in the winter, was laid up with an acute attack in the knees and ankles; confined to his bed for three months. Present attack (March, 1908): Pains and stiffness in the knees and ankles; quite unable to walk. Treatment: Thyminic acid in 8 grain doses with high-frequency electricity and ray light baths. Remarks: In three weeks could walk with comfort and is now able to shoot and play golf.

CASE 7.—A man, aged 50 years. Previous history: Has had several attacks of sciatica and a gouty knee with neuritis. Present attack: Has been quite free since taking thyminic acid 4 grains thrice daily. Can walk with comfort and play golf.

CASE 8.—A woman, aged 75 years. Previous history: Has suffered with inherited gout for many years; enlarged joints of fingers; unable to walk; recurrent attacks of acute eczema. Present attack: Has taken thyminic acid in doses of 4 grains for two years with very marked relief. Can now walk with comfort and has had no eczema for 18 months.

CASE 9.—A man, aged 40 years. Previous history: Acquired gout; suffers with gouty neurasthenia attacks every three to four weeks; sleeplessness, instability, anorexia; becomes quite unmanageable;

a sufferer for 10 years; a careful liver, taking much exercise. Present attack: Under thyminic acid 8 grains thrice daily the attacks became less severe. The last attack was three months ago, the longest interval of health he has had hitherto.

CASE 10.—A boy, aged 13 years. Previous history: Eczema almost from birth. Present attack (July 6th, 1906): Face, hands, and chest covered with purulent eczema; has been unable to attend school. Treatment: 4 grains thyminic acid three times a day; byno-glycerophosphates. Remarks: Is now attending school and only occasionally has an outbreak on the fingers.

CASE 11.—A man, aged 60 years. Previous history: Has had gouty symptoms for many years. Present attack: Gastric catarrh; acute dyspepsia; stomach much distended; gastralgia. Treatment: 8 grains thyminic acid three times a day; high-frequency electricity. Remarks: Symptoms subsided in three weeks. Is now able to digest food; stomach nearly normal.

CASE 12.—A woman, aged 60 years. Previous history: Gradually increasing obesity. Present attack: October, 1906; weight, 12 stones 3 pounds; May, 1907, weight, 11 stones. September, 1908; weight, 10 stones 1 pound. Treatment: 8 grains thyminic acid three times a day. Remarks: Can now take walking exercise with comfort and has not increased in weight; is strong and in good health.

CASE 13.—A man, aged 50 years. Previous history: Has suffered from attacks of acute gout for several years. Treatment: Since taking thyminic acid regularly during the past three years has been quite free.

Queen Anne-street, W.

OTOSCLEROSIS: SOME POINTS IN ITS ETIOLOGY, DIAGNOSIS, AND TREATMENT.

BY ALEXANDER R. TWEEDIE, F.R.C.S. ENG., L.R.C.P. LOND.,

LATE CLINICAL ASSISTANT AT THE HOSPITAL FOR DISEASES OF THE THROAT, GOLDEN-SQUARE, LONDON, ETC.

A VAST amount of work has of recent years been carried out to elucidate the morbid processes on which the disease "otosclerosis" depends. Its pathology has thus been fairly well established, and its history and course are comparatively well known, but its cause is still most obscure. It must further be admitted that its diagnosis, especially in the initial stages, may at times be most difficult, whilst as regards its treatment we do not yet know any method or drug which can be claimed as curative.

It is usual to find the description of otosclerosis in textbooks on diseases of the ear included in those chapters dealing with chronic inflammatory or catarrhal processes of the tympanic cavity. This arrangement, however, is at least most misleading, as the disease is neither catarrhal in origin nor the result of an inflammation in the ordinary acceptance of this term, nor does it originate in the middle ear. It is dependent on totally different causes and must be treated by quite different methods. The chief pathological changes may be described as consisting in the formation of small well-defined areas of newly-formed bony tissue which replace the true bone. These occur probably as the sequel of a local trophic disturbance or vascular stasis and consist in the rarefaction of the parts so affected, which subsequently become sclerosed and in places proliferated. Between these pathological changes and the healthy adjacent bone a sharp line of demarcation exists. The commonest site for these alterations is the anterior superior angle of the oval window, and their chief result is ankylosis of the stapedio-vestibular joint.

Bearing in mind the pathological changes, it is obvious we are dealing with a condition which is necessarily most unresponsive to drugs or any method of treatment. It may be improved, however, or perhaps it would be more accurate to say may be arrested, by the exhibition of drugs and by general treatment when circumstances permit an ideal life in healthy surroundings, especially if at the same time care and worry can be reduced to a minimum and the least possible demand made on both the mental and bodily energies.

Etiology.—As already mentioned, the causes which lead to the production of the pathological changes in "otosclerosis" have yet to be determined. The disease, however, seems to be attributable either to circumstances which affect the general nervous system or to alterations of the normal condition of the blood and circulatory mechanism. Thus its commencement can be constantly referred to shock, fright, sudden grief, or prolonged mental anxiety, whilst as instances of the second group of causes, chlorosis, anæmia, severe hæmorrhage, and parturition may be mentioned, and its incidence is traceable at times to the establishment of the menstrual functions in young girls. General febrile conditions also have a causal relation to its onset, influenza being especially noticeable in this respect; and finally it appears to be much commoner in people of the neurotic type.

Most statistics reveal that "otosclerosis" is slightly more common amongst women than men, the reason for which is assigned by some to the relation which parturition appears to have, both as regards its onset and further progress. When we consider, however, how much more likely all the probable causes are to affect the female sex it is not surprising to find as a matter of practical experience that it occurs even more commonly amongst women than the published records indicate. The disease is often found in several members of the same family, though neither of the parents may be afflicted. Still many of these patients, as already stated, are neurotic, and thus heredity may have some influence on its occurrence.

Course.—The disease commences probably in the second or third decade of life, though perhaps patients most frequently seek advice between the ages of 25 and 35 years. Its onset is most insidious and its first symptom is either slight tinnitus or a condition of apparent inattention, observed by others, especially when several are conversing together, as, for instance, at table. The patients may be unaware of this latter abnormality, and thus it occasionally happens that it is chiefly the anxiety of friends which leads them to seek advice. These early symptoms are particularly important because it is at this stage especially that we should urge active treatment. If further progress can now be arrested, although existing lesions are not cured, the condition of the patients will be far less distressing than when they themselves realise their misfortune and both advanced deafness and tinnitus have become a source of continual worry and annoyance to them; to say nothing of the obvious disadvantage and severe handicap to which they are then subjected on all sides.

If untreated in the early stages the deafness and tinnitus are progressive in varying degrees of rapidity as regards the ear first attacked, whilst almost always the other ear also sooner or later becomes similarly involved. Acute exacerbations of the disease also occur often associated with those affections mentioned above as etiological factors. The loss of hearing may ultimately become extreme though the disease very rarely leads to absolute deafness. The tinnitus may persist or as the power of hearing depreciates may become less and less so as to be almost negligible, or it may indeed absolutely disappear.

Diagnosis.—The objective examination is chiefly "negative"—that is to say, the tympanic membrane is found normal or nearly normal, though it sometimes presents a peculiar pinkish hazy appearance, often quite characteristic though difficult to describe accurately. The membrane is moveable together with the handle and short process of the malleus, and there are no signs of inflammatory or catarrhal conditions either past or present. The nasal passages and Eustachian tubes are often found unusually patent, due apparently to collapse and anæmia of the mucous membrane in these situations. The external auditory canal, too, is often so patent that at times a good view may be obtained of the tympanic membrane without the aid of the speculum, whilst its lining membrane is white and shiny and peculiarly deficient in wax.

Though these are the conditions usually found on examination cases do occur in which there is co-existent catarrh of the middle ear and Eustachian tubes associated with rhinitis and naso-pharyngitis. The deafness and tinnitus may be aggravated by these complications, but for the most part persist even when such catarrhal changes subside or respond to treatment. Operative or energetic local treatment, however, in this direction should be adopted with great caution as it may only intensify the deafness and tinnitus. If possible it is better avoided or only tried tentatively in such cases as present some doubt as to the existence of otosclerosis.

The functional tests, as a rule, afford very similar results to those found in any other lesions which involve the conductive apparatus of the middle ear, and may be shortly enumerated as consisting in marked depreciation of the range of perception for whispers; little or no lowering of the upper tone limit; definite raising of the lower tone limit by air conduction; perception *viâ* the bone greater than *viâ* the air; bone conduction greater than that of a normal

observer. Another symptom common to this and some forms of middle-ear disease should here be mentioned—viz., the well-known phenomenon of hearing better in a noise, the theories as to the cause of which do not here concern us. Such results (other pathological conditions of the conducting apparatus being excluded) point to the more or less impaired mobility of the footplate of the stapes in the oval window in the immediate vicinity of which, as already stated, is the most common site for the disease.

Many cases, however, are found which do not conform to these results, the cause for which is probably dependent on the coexistence of other foci of the disease in the bony capsule of the labyrinth. Thus, for instance, the upper tone limit may be markedly shortened as well as the lower owing to the disease implicating the basal turn of the cochlea, a condition of affairs that one would really expect to find more frequently when the proximity of this structure to the margins of the oval window is remembered. Again, the disease may commence, though rarely, in other parts of the bony capsule, leaving the immediate neighbourhood of the oval window free, when the upper tone limit may be curtailed whilst the lower remains unaltered. In such cases the bone conduction may not be lengthened and may even be actually shortened, when a differential diagnosis will have to be made between otosclerosis and other affections of the auditory nerve.

Thus as regards the diagnosis we have three main classes to consider—the uncomplicated cases, those associated with other diseases of the middle ear and Eustachian tube, and those which have to be differentiated from other lesions of the auditory nerve itself. In early uncomplicated cases we have little else to depend on for diagnosis but the results of accurate functional tests and the absence of obstructive or catarrhal lesions in the tubes and middle ear—should in addition the membrane present a pinkish haze this is almost pathognomonic of the disease. In cases associated with catarrhal and post-inflammatory conditions in these situations the very slight improvement or even deterioration of the hearing after their treatment is very strongly suggestive of otosclerosis. When the disease involves portions of the bony capsule other than the margins of the oval window and the mobility of the stapedio-vestibular joint is unimpaired it is impossible at once to distinguish the symptoms to which it gives rise from those due to other diseases of the internal ear. The subsequent involvement of the conductive apparatus will, however, help to establish the diagnosis. In well-established uncomplicated cases of otosclerosis the diagnosis is generally quite straightforward.

Some observers have made use of a large series of tuning-forks in working out the functional tests in order to locate the site and to estimate the distribution of the disease in the bony capsule of the labyrinth. However, except perhaps from an academic point of view, such extensive data effect no object, whilst sufficiently accurate knowledge can be obtained with the use of three tuning-forks, "C^1," "C 64," and "E," together with testing the hearing with a standard watch, an acoumeter, or Galton's whistle. Mention ought also to be made of Gellé's test, the response to which, if positive, is very strong evidence against the presence of otosclerosis—at any rate in its most usual situation—because it points to mobility of the stapedio-vestibular joint and the functional integrity of the same.

Treatment.—As already stated, it is inconceivable, in the present state of our knowledge, that any local treatment can effect a cure or even permanent improvement in a disease of this nature, and such indeed is the conclusion to which one is driven after a careful review of the work done and of the efforts made in this direction. Many ingenious operations have been suggested and carried out, but although isolated instances are reported where temporary improvement has occurred, relapse and eventually further deterioration seem to be the usual result. Most operators freely admit the inefficacy and inadvisability of such attempts at operative interference. Removal of the stapes would at first sight seem reasonable as a possible means of removing the cause of obstruction in the region of the oval window, and with this end in view that operation has been performed. Small trephine openings have also been made into the vestibule through the inner wall of the tympanum with the object of allowing an unimpeded transmission of sound waves to the termination of the auditory nerve. Neither of these procedures, however, has been followed by any appreciable success, but indeed more often they have led to increased deafness. This is not surprising when we reflect that the resulting cicatrices must, if anything, constitute a lesion more obstructive to the passage of sound waves than the pre-existing bony barrier. Finally, various attempts have been made towards the remobilisation of the stapedio-vestibular joint, but they have served only to stimulate a firmer ankylosis of that articulation. Injections of fluids and vapours *viâ* the Eustachian tube have been practised *ad nauseam*, but, as such a statement indicates, with no beneficial effects. Rapidly recurring variations of air pressure in the external auditory meatus, by which some claim to have obtained improvement, have for their object a remobilisation of the joints of the ossicular chain, and in particular of the stapedio-vestibular joint.

Theoretically it seems most improbable that any such oto-massage can influence the process of disease in the latter situation even in its earlier stages, and when ankylosis has occurred, a beneficial effect from this procedure appears inconceivable. Practically, too, the results are most disappointing. In watching these cases in a large clinic I have been unable to find any patients who were really improved by this form of treatment. Indeed, more often than not, any local procedures, even repeated politzerisations, will only aggravate the deafness, the associated tinnitus, and general discomfort.

Attempts at local treatment are therefore strictly contra-indicated, and in uncomplicated cases all manipulative or operative procedures in the nose and naso-pharynx should be studiously avoided. Indeed, even as regards treatment of other parts of the body, when a choice is offered, the least drastic measures should be adopted, since as above stated, mental stress or physical strain tends to aggravate the symptoms. We have thus to rely on such general treatment as is available. This resolves itself into an effort to relieve the symptoms and, if possible, prevent the further progress of the local lesions.

Although the deafness would seem to be the greater calamity, these patients are often very much more worried by the tinnitus, so much so that it is not uncommon for them to say that they would not mind the former disability if only the latter could be arrested. Unfortunately, severe tinnitus points to extensive involvement of the bony capsule of the labyrinth and makes the outlook both as regards progress and relief the more unfavourable.

In the first place, an outline of the nature of the complaint should be given to the patients so that they may realise the position of affairs and thus be saved repeated and unproductive consultations. They should then be advised to put themselves under the care of their usual medical attendant for a course of treatment extending over several months with the object of so improving their general condition that a further unfavourable progress may be prevented. Such treatment should consist in a very strict adherence to the general rules of health coupled with the exhibition of such medicinal aids as will conduce to the maintenance of all the functions of the body in the best possible state. The efficient and healthy action of the alimentary tract and digestive apparatus must be insured, and any other concurrent maladies, such as anæmia and its results, should be treated, and special attention should also be paid to sufficient exercise, fresh air, judicious clothing, and diet, whilst that climate or locality which best suits the patient's general health should be strongly advised. Avoidance of worry and overwork, in so far as it may be possible, should be also enjoined, as they doubtless act unfavourably on the course of the disease.

Since in some cases every successive confinement appears to have a prejudicial influence on the symptoms limitation of children has been recommended. Although it is probable that pregnancy and the puerperium, like other heavy demands on the system, have a causal relation to the incidence and progress of the disease, the advisability of this suggestion is open to many objections. It is quite conceivable that to deny a patient the satisfaction of her maternal instincts may after all do much more harm than if matters are allowed to take their natural course. It is, however, most important to insist on the necessity of a thoroughly able anæsthetist and skilled accoucheur whose efforts will combine to reduce shock and hæmorrhage to the lowest possible minimum.

For the acute exacerbations of the symptoms, which from time to time occur during the course of the disease, some relief may be gained by the application of blisters to the

mastoid region. Such sudden increase of the deafness or tinnitus is probably not due to rapid extension of the disease itself to other parts of the inner ear but to a temporary local congestion of the vascular system of the labyrinth which may be expected to bear more heavily on areas already diseased. Such conditions, however, if untreated may very possibly lead to a further spread of the disease and a permanent increase of the symptoms.

Apart from the drugs necessary to combat any general dyscrasia from which the patient may be suffering tonics, such as strychnine, phosphorus, or arsenic alone or combined with the iodides, should be advised. This treatment in the first instance should be adopted for a period of some six months with short remissions and then short courses of these medicines extending over six weeks should be advised two or three times a year. In this way the further progress of the disease may be controlled to some extent, though, of course, a cure of already existing lesions cannot be expected. Such treatment, however, often makes the patient more comfortable generally, reduces the tinnitus, and apparently improves the hearing. The improvement is usually more apparent than real and is due probably to the relief of the subjective noises, for the results to the functional tests remain much the same.

Tinnitus and occasionally vertigo may require special treatment, for which purposes the bromides, hydrobromic acid, and drugs of like action are still probably the best. They should be used to give temporary ease pending the more permanent relief from the general and therapeutic measures recommended above. Unfortunately severe tinnitus points to an irritative lesion in the cochlea and vertigo to a similar affection of the walls of the semicircular canals, and consequently the exhibition of such sedatives may meet with little response. A course of Weir-Mitchell's rest cure is said to be often of great benefit in cases of otosclerosis with extremely marked subjective symptoms occurring in neurotic subjects.

Whatever drugs or method of treatment are used the patients should be told that only a prolonged course as above suggested can be expected to be of any service. If they are not disposed to carry this out the sporadic "taking a bottle of medicine" means only useless expense to them.

That the treatment outlined above is vague and empirical must be admitted, yet it is justified by the results obtained, and till a better and possibly specific treatment is discovered should certainly be employed.

Artificial aids to hearing are sometimes useful, but little can or need be said of them. Generally speaking, the more cumbersome and unsightly the more valuable they are, but the best plan is to advise the patient to visit a reliable maker of such instruments and to purchase that which affords him most relief if such aids are desired.

In the past patients afflicted with otosclerosis have often been allowed to drift without appropriate treatment and without warning as to the probable course of the disease so that they have become the prey of the quack and his advertisements, and the object of this paper is to urge the importance of early recognition and early and prolonged treatment of this condition. Though a cure cannot be expected, a certain amount of relief may be obtained and, what is much more important, the further progress of the disease may be controlled or actually arrested. An excellent and most exhaustive monograph, "Die Otosklerose," has been written by Dr. Denker of Erlangen, in which those who are sufficiently interested in the subject will find it ably discussed.

In conclusion, I wish to express my gratitude to Mr. C. A. Parker for the great help he has given me in preparing this paper whilst working with him at the Throat Hospital, Golden-square.

Nottingham.

THE ROCKEFELLER INSTITUTE FOR MEDICAL RESEARCH.—At a recent meeting of the board of directors of the Rockefeller Institute for Medical Research Dr. Rufus I. Cole of the Johns Hopkins Medical School, Baltimore, was appointed director of the hospital of the Rockefeller Institute for Medical Research, and Dr. Christian A. Herter was appointed one of the physicians to the hospital. Work on the hospital buildings is in progress and it is expected that they will be completed and the hospital be ready for opening in November, 1909.

THE MERCURIAL REACTION AS AN ELEMENT OF DIAGNOSIS IN SYPHILIS.

BY F. CURIONI, M.D. TURIN.

SEVERAL times during my practice I have observed the fact, apparently strange, of an intolerance, sometimes relative, sometimes absolute, to mercury presented by some persons. They were individuals who applied to me for advice concerning the treatment of a syphilitic affection which they said they had contracted some months previously and of which on the most diligent examination there were no apparent traces. Some of the syphilitic or pseudo-syphilitic said that they had been examined at the time of the ulcer by medical men who had diagnosed it as syphilitic; others, again, were satisfied by the diagnosis of their chemist, and some, and these unfortunately were not few, had accepted the confirmation of so-called practical friends. In dealing with these cases I was often perplexed what to do. In any case in which I was convinced that the individual was not affected by syphilis but only the victim of an error of diagnosis I advised him not to use specific treatment. In cases more or less suspicious, on the other hand, I have usually prescribed a mild cure for precaution, following in this respect the advice of the greatest specialists. It was among this latter group that, as already stated, I noted a number of cases strangely intolerant to the action of mercury, especially during the first days of treatment. It was in this way that I had the idea that persons affected with syphilis supported mercury much better than normal subjects and I decided to find how the mercury was eliminated in the urine by the healthy and how by the syphilitic.

In order to accomplish my research I chose 30 syphilitic patients and at the same time 20 friends whom I knew were quite free from the disease and submitted them all to mercurial treatment, first having made sure that the kidney was in normal condition in the syphilitic as well as in the healthy. I proceeded in this way. In the morning, always about the same time—that is, at about 11 A.M.—I made an injection of 0·01 of perchloride of mercury in 1 cubic centimetre of distilled water. I collected the urine at first about 7 P.M., again some five or six hours later, and also on the following morning between 8 and 9 o'clock.

With the aid of my friend, G. Fortuna, Doctor in Chemistry, I tested the specific reaction in the three samples of equal volume of urine, using for that purpose the method suggested by Professor Vitali, which is as follows. Place in 200 cubic centimetres of urine previously acidified with a few drops of hydrochloric acid eight grammes of copper wire, well cleaned and cut in small pieces, allowing this to remain for three hours, taking care to agitate the liquid occasionally, then decant the urine and wash the copper well first with distilled water, then with alcohol, and finally with ether. (In doing so it is necessary not to shake the copper too much.) Next place the washed copper on blotting-paper to dry easily; afterwards place in a test-tube quite clean and dry and close this with a plug of cotton; now heat gently the bottom of the tube until the wire becomes slightly brownish, then allow to cool; when quite cold reject the copper and drop in a tiny piece of iodine, heat again gently the bottom of the tube in such manner as not to develop the iodine vapour too strongly. In the presence of a mercurial salt there will be formed on the cool part of the tube small crystals of yellow iodide of mercury and also red bi-iodide. The chemical reaction is easily understood. It is necessary to follow exactly the above directions and to place the tube at the moment of the reaction over something white in order to make the slightest trace of colour visible; to an unaccustomed eye it may be difficult to distinguish between the violet-red vapour of the iodine on the one hand and the straw-yellow of the iodide or the bright-red of the bi-iodide on the other, especially as the quantity is so infinitesimal. It is well to practise beforehand with a weak solution of mercurial salt until one is accustomed to distinguish between the colours. It is most necessary that the tube should be quite dry, because otherwise the iodine vapour dissolving in the small particles of water adhering to the tube will colour them and will in this way interfere with the exact appearance of the reaction. The quantity of iodine

should be very small, just visible to the naked eye, otherwise the too abundant vapour of the metalloid will mask the reaction completely. Take care also in heating the copper wire not to heat the top of the tube, or the mercurial vapour, not being able to sublime on the warm glass, will escape into the cotton-wool plug. To obtain a still more delicate reaction gold in grains should be used instead of copper, proceeding in identically the same way as described.

From the study of what I have observed with Dr. Fortuna I formulate the following conclusions. 1. The mercurial reaction in the urine of the healthy is much more evident than in the syphilitic, in which sometimes there is no result at all; which means that the elimination of mercury in the urine of the syphilitic is always much slower than in the healthy. 2. The mercurial reaction is *nil*, or nearly so, in cases of syphilis recently contracted, especially when symptoms are apparent; and the reaction is only slightly evident, and never so well as in normal cases, in the syphilitics in whom two or three years have elapsed since the appearance of the ulcer. 3. Finally, in cases of long standing, of, say, 10 or 12 years, the mercurial reaction is as evident as in normal cases. (Mercurial reaction is positive.)

Now, to come to the consideration of the matter in order to explain these facts we must be content with a hypothesis. In the first place, in the subject of syphilis, the mercury introduced perhaps unites itself in a special organic combination with the virus, for which, being a specific remedy, it must have a special affinity, and in this condition it does not pass, or passes only with difficulty, the renal filter, and at the same time does not have any offensive action on the organism. Thus in this fashion it would be easy to understand the old empiric advice to wait before commencing the general cure until the secondary symptoms have appeared and remain in view for some time. Lesser, who had occasion to analyse the phenomena from this point of view, had the conviction that the morbid evolution is milder and more regular if the general treatment is commenced rather later and not before the secondary symptoms.

From what I have observed myself in my patients I participate in the opinion of Lesser and firmly believe that a too early treatment is unadvisable, because the action of the antigen being paralysed by the mercury the production is stopped of the special antibodies which would be the natural defence of the organism provided for the true destruction of the virus. When the virus is already in subjection to the specific antibodies (in old syphilis), or is absent, or the mercury has been given in excess, the mercury passes freely through in the urine.

On the other hand, the rapid elimination in the pseudo-syphilitic is probably due to a vital tendency of the organism to expel whatever is noxious to it. For whatever concerns the intolerance to mercury observed in the pseudo-syphilitic, at least in the beginning of the treatment, I believe it lasts only until the specific antibodies of the mercurial antigen have not come to paralyse its poisonous action. It is Boeri, one of the first in his fine work on the immunity against non-bacterial poisons, who has experimentally demonstrated this new form of immunity acquired by the organism, and here to put in parenthesis it must be remembered what Salmon said about the therapy: "That sometimes in the course of the therapy of syphilis one sees a first treatment followed by a rapid improvement, and a second, third, and fourth series of cures to become less and less beneficial, and it is convenient for this to alternate the mercury with atoxyl and *vice versâ*." I personally believe that it is most probable that the antitoxic reaction which proceeds in the organism against these special poisons neutralises their therapeutic action.

The scientific work of late years on the sero-diagnosis of syphilis has given good results. Thus Wassermann's reaction has especially met with the favour of the bacteriologists and of the clinicians. "It is more frequently both positive when the disease is flourishing in every period, including that of primitive ulcer; it is particularly intense in the secondary manifestations, and it may also be intensely positive in hereditary syphilis; it may also be positive in latent forms, but in this condition the percentage of negative results is larger" (Micheli Borelli); but Wassermann's reaction is not at hand for all practitioners who are not trained to this kind of research.

On the contrary, the mercurial reaction as here described is absolutely simple in technique. It may render good service not only in doubtful cases of syphilis and in obscure exanthema but also in retrospective diagnosis, as when one wants to know if an individual who presents no symptoms of acquired syphilis has been at some past time a victim of the infection. This, however, on condition that not too long has elapsed since the date of the suspected infection.

I have not yet had occasion to test the mercurial reaction in tabes or progressive paralysis not hereditary syphilis, but I anticipate that in the case of tabes and of paralysis it must give positive results, these diseases being almost certainly not of syphilitic nature but simply of syphilitic origin.

I am glad to announce to my colleagues for investigation these new observations on syphilis, and I hope that further research will confirm their usefulness.

Shaftesbury-avenue, W.C.

A CASE OF RUPTURED SMALL INTESTINE;

OPERATION; SUBSEQUENT TRANS-PLEURAL DRAINAGE OF TWO SUB-DIAPHRAGMATIC ABSCESSES; RECOVERY.

BY LIONEL E. C. NORBURY, M.B., B.S. LOND., F.R.C.S. ENG.,

SURGICAL REGISTRAR, ST. THOMAS'S HOSPITAL, LONDON, S.E.

THE patient, aged 28 years, was admitted to St. Thomas's Hospital on Oct. 15th, 1907, under the care of Mr. C. A. Ballance, with a history of having fallen some 30 to 40 feet from a crane which was being employed for unloading a barge—it could not be ascertained which portion of his body came in contact with the barge; a period of unconsciousness followed, but consciousness had returned on admission. The patient appeared pale and collapsed; general severe abdominal pain was complained of; the pulse-rate was 80 per minute, the respirations were 32, and the temperature was 97·4° F. No bruising of the abdominal wall was visible; the abdomen moved poorly on respiration. A localised area of dulness was detected in the left flank; no shifting dulness and no obliteration of liver dulness could be made out. The urine was withdrawn by catheter but it contained no blood. One and a half hours later the pulse-rate was 72 per minute, the area of dulness had increased in extent towards the splenic region, and the abdominal pain was still severe but there was no vomiting. Six hours later the pulse-rate had risen to 92, and at the end of nine hours it had reached 104 per minute. The area of dulness had increased and extended from just below the left costal margin as far as Poupart's ligament on its outer half and to some extent backwards into the loin; abdominal pain was still a marked feature. The temperature had gradually risen to 99·4°. There was no abdominal distension.

From these signs and symptoms a diagnosis of probable rupture of the intestine was made and an exploratory operation was undertaken some ten hours after the accident. The abdomen was opened by a four-inch vertical incision just to the left of the mid-line and having its centre opposite the umbilicus, the fibres of the rectus were separated, and on opening the peritoneum a moderate amount of thin turbid fluid was evacuated but no gas. A condition of acute peritonitis was present, the walls of the intestine being markedly injected and sticky lymph everywhere present, but chiefly so in the left half of the abdomen; there was no fæcal odour. The small intestine was rapidly passed in view and a rupture some one and a half inches in length was discovered in the long axis of the bowel and opposite its mesenteric attachment. This was closed by a double row of continuous silk sutures, the first taking up all the coats and the second only the sero-muscular coats. A small tear in the mesentery opposite the rupture was also sutured with silk. Bruising of adjacent coils of intestine and of the omentum was also present. The exact level of the lesion was not definitely ascertained, but it apparently involved the jejunum or upper portion of the ileum. A second smaller incision through the right rectus just above Poupart's ligament was next made, a drainage-tube was passed into the pelvis, and the peritoneal cavity was thoroughly irrigated with normal saline solution. The abdominal wall was sutured in layers, the pelvic cavity being drained by a tube passed through the lower incision. Intravenous infusion with saline

solution was employed throughout the operation, some two to three pints being utilised.

On the following day the patient's condition was much improved; the drainage-tube was replaced by a gauze plug on the third day and the latter was removed on the fourth day. On the second day after the operation pain in the right side of the chest was complained of and examination led to a diagnosis of "dry pleurisy" at the right base and "pneumonia" involving the left lower lobe; the chest was strapped. The temperature on the third day was 98° and the pulse-rate was 84 per minute. From this date the temperature became irregular, varying from 97° to 102·8°. The bowels were well opened on the third day and the patient enjoyed a fish diet on the eighth day. An increasing area of dulness was detected on the right side of the chest and on the eighteenth day this reached the middle of the scapula posteriorly; a diagnosis of probable "empyema" was made. The signs at the left base gradually cleared up. On the twentieth day an aspirating needle inserted through the ninth right intercostal space in the posterior axillary line withdrew a pint of very offensive pus mixed with gas; accordingly on the following day a portion of the ninth rib was resected. The general pleural cavity was shut off by adhesions, the dome of the diaphragm being considerably raised, and an incision through the latter revealed a large abscess cavity between the liver and diaphragm, from which another pint of pus was evacuated; a large drainage-tube was inserted and the wound partly closed. The pus yielded a pure culture of bacillus coli. As the patient's temperature still continued to fluctuate, subcutaneous injections of anti-coli serum were given on the twenty-fifth and two following days; the temperature assumed a lower level. On the twenty-ninth day the patient received a subcutaneous injection of "bacillus coli vaccine" prepared in the St. Thomas's Hospital clinical laboratory by Dr. L. S. Dudgeon. The temperature reached the normal on the thirty-first day but commenced to rise again on the thirty-fourth day, with the advent of an urticarial (serum) rash. The abscess cavity drained well, the tube being gradually shortened and replaced by one of smaller calibre on the forty-second day; another injection of vaccine was also administered. The temperature continued to fluctuate, but gradually it assumed a lower level, a free discharge of offensive pus continuing. The patient got up and sat in a chair for a few hours on the fifty-third day and received another injection of vaccine on the fifty-sixth day. A troublesome cough developed and the temperature rising the patient had to take to his bed again. Examination of the chest revealed an area of dulness at the right base, reaching as high as the middle of the scapula; breath sounds were absent over this area, vocal fremitus was much diminished, and vocal resonance was not obtainable. Aspiration through the ninth space in the scapular line revealed the presence of pus. On the following day a portion of the tenth rib was resected and another large subphrenic collection of pus was evacuated and the cavity was drained; no communication between this abscess cavity and the former could be demonstrated. A fourth injection of vaccine was given on the sixty-fourth day; the temperature reached the normal level on the sixty-ninth day and remained settled. From this date the patient's general condition rapidly improved. Some 14 days later he was allowed to get up morning and evening. The drainage-tubes were gradually shortened and the amount of discharge rapidly diminished and lost its offensive character. The bowels were kept well open throughout the treatment of the case.

On Jan. 28th, 1908, some three and a half months after the accident, the patient was sent to a convalescent home. A final note on the case reads as follows: "Abdominal wounds quite sound—anterior sinus of chest almost closed, posterior sinus is formed by a narrow track some five inches in length—there is no trouble with the bowels." The patient was again examined on his return from the convalescent home four weeks later; he had put on weight—both sinuses had quite closed and he experienced no discomfort whatever. Some five months after the accident he was allowed to start light work.

This case presents several points of interest. First, the comparative rarity of the accident. Secondly, the difficulties presented in the diagnosis of a "sub-phrenic collection of pus," the physical signs suggesting the presence of an empyema, rather than of pus below the diaphragm. Thirdly, the beneficial effect of the anti-coli serum and bacillus coli vaccine which showed itself in an attempt to stop the spread of the septic process to a great extent, and in the rapid recovery of the patient and rapid healing of the sinuses after evacuation of the pus.

In conclusion, I must express my thanks to Mr. Ballance for his kindness in allowing me to conduct the treatment of the case and for permission to publish these notes.

St. Thomas's Hospital.

A METHOD OF PERFORMING ABDOMINO-PERINEAL EXCISION FOR CARCINOMA OF THE RECTUM AND OF THE TERMINAL PORTION OF THE PELVIC COLON.

BY W. ERNEST MILES, F.R.C.S. ENG., L.R.C.P. LOND.,

SURGEON TO THE CANCER HOSPITAL, BROMPTON, S.W., AND TO THE GORDON HOSPITAL FOR DISEASES OF THE RECTUM, VAUXHALL BRIDGE-ROAD, S.W.

REMOVAL of the rectum by a combined abdominal and perineal operation was first performed by Czerny in 1884. Since that time several other surgeons, notably Maunsell, Chaput, Gaudier, Challot, Weir, Boechal, Giordino, Quénu, Reverdin, Tuttle, Gant, Mathews, Sir Charles Ball, Wallis, and Aldrich-Blake have employed the method with certain modifications of procedure and with varying success in regard to mortality. So far as I have been able to gather from the literature of the subject, however, the technique of these operators seems to have failed in one important respect—namely, the complete eradication of the *zone of upward spread* of cancer from the rectum, whereby the chance of recurrence of the disease, above the field of operation, can be diminished if not entirely obviated.

Until the close of the year 1906 I had relied solely upon the perineal methods of excision of the rectum, but I found that, even after the most complete and extensive removal possible, recurrence of the disease was a rule to which there were few exceptions. In fact, from a personal experience of 57 such operations, my records showed the disquieting fact that recurrence took place within periods ranging from six months to three years in 54 instances. Moreover, I found that although perfection of technique had reduced the proportion of recurrences in the immediate vicinity of the field of operation, recurrence nevertheless appeared in situations that were beyond the scope of a removal from the perineum. Post-mortem examination showed that these situations were (*a*) the pelvic peritoneum, (*b*) the pelvic mesocolon, and (*c*) the lymph nodes situated over the bifurcation of the left common iliac artery. Bearing these facts in mind I made observations upon the course taken by the upward spread of cancer among patients who had died from inoperable cancer of the rectum and found that the disease invariably extended by continuity of tissue along the parietal attachment of the pelvic mesocolon and in the adjacent parietal peritoneum for about one inch on either side of it as far as the group of lymph nodes situated over the bifurcation of the common iliac artery. In one case the disease extended by continuous spread to the suprarenal capsule of the left kidney. In all the cases thus examined the infiltration of the parietal border of the pelvic mesocolon had caused shrinkage of the pelvic mesocolon itself, whereby the pelvic colon appeared to be bound down, a condition which readily explains the difficulty in obtaining a satisfactory spur when performing colostomy in an advanced case of cancer of the rectum.

From these observations it is obvious that the above-mentioned structures constitute the *zone of the upward spread* of cancer from the rectum, the removal of which is just as imperative as is the thorough clearance of the axilla in cases of cancer of the breast if freedom from recurrence is to be hoped for. The appreciation of this important fact induced me two years ago to abandon the perineal methods of excision of the rectum as inadequate for the purpose of obviating recurrence and to endeavour, by utilising an abdominal method of procedure, to bring the operation of excision of the rectum into line with those methods of performing abdominal

hysterectomy known as the Wertheim and the Krönig-Wertheim.

The study of the spread of cancer from the rectum has led me to formulate certain essentials in the technique of the operation which must be strictly adhered to if satisfactory results are to be obtained—namely: (1) that an abdominal anus is a necessity; (2) that the whole of the pelvic colon, with the exception of the part from which the colostomy is made, must be removed because its blood-supply is contained in the zone of upward spread; (3) that the whole of the pelvic mesocolon below the point where it crosses the common iliac artery, together with a strip of peritoneum at least an inch wide on either side of it, must be cleared away; (4) that the group of lymph nodes situated over the bifurcation of the common iliac artery are in all instances to be removed; and lastly (5), that the perineal portion of the operation should be carried out as widely as possible so that the lateral and downward zones of spread may be effectively extirpated.

The Operation.

This is one of the most formidable operations in surgery, entailing, as it does, the removal of practically the whole of the pelvic colon as well as the rectum. I have now performed it 12 times with a mortality of 41·6 per cent. Nine of the patients were males, of whom four died, and three were females, of whom one died. The surviving seven patients are all at present free from recurrence, the first three having been operated upon in January, March, and May of 1907 respectively.

Preparation of the patient.—In all cases in which there is marked stenosis of the bowel, a preliminary left iliac colostomy should be performed at least two weeks before the operation. If there be no abdominal distension and if the lumen of the bowel be not much encroached upon the colon should be thoroughly emptied of its contents by the aid of enemata and mild purgation.

Method of operating.—The patient having been placed in an exaggerated Trendelenburg posture, a median incision is made from the umbilicus to the symphysis pubis and a self-retaining abdominal claw retractor is placed in position. The pelvic colon is then drawn out into the wound and a left iliac colostomy, if one does not already exist, is established in the usual situation through a second incision. I usually do this by simply pushing a loop of the uppermost part of the pelvic colon through an incision in the abdominal wall and fixing it in position in the ordinary way. Some operators advocate first dividing the bowel and then establishing the colostomy from the proximal end only, but I think that by so doing there is a greater tendency to protrusion afterwards. As soon as the knuckle of colon has been fixed in position in the manner indicated, the pelvic colon is divided transversely about two inches below it and both ends are closed firmly by means of purse-string sutures. The closure of the distal end should be done carefully, so as to avoid leakage from that part of the bowel during the subsequent steps of the operation. The peritoneal covering of the pelvic mesocolon is then divided transversely backwards on either side to the point where the pelvic mesocolon crosses the common iliac artery, the incisions extending into the parietal peritoneum for the distance of about one inch. The inferior mesenteric artery is then ligatured below the point where it gives off its uppermost branch to the pelvic colon. When this has been done the pelvic mesocolon itself is divided completely as far backwards as its parietal attachment, the inferior mesenteric artery being divided below the point of ligature. The upper and remaining portion of the pelvic mesocolon is now turned upwards for the distance of an inch or more and all the cellular tissue containing the group of lymph nodes situated over the bifurcation of the left common iliac artery dissected carefully away. All bleeding vessels in the cut edge of the pelvic mesocolon are caught and tied. The remainder of the operation is now practically bloodless and should be rapidly proceeded with. The peritoneum is next divided by incisions which extend downwards into the pelvis, one on either side of the parietal attachment of the pelvic mesocolon and at least one inch distant from it, until the recto-vesical pouch is reached, when they are carried round the lateral aspects of the pelvic wall to meet again in front just behind the base of the bladder. In the female the left broad ligament should be detached, together with the left ovary and tube. This having been done, the pelvic mesocolon together with the adjacent strip of peritoneum on either side of it is detached from the hollow of the sacrum. By keeping close to the anterior sacral ligaments, the cellular tissue containing the lymph nodes in that situation is detached with the pelvic mesocolon in one piece. This separation is continued downwards in the middle line as far as the sacro-coccygeal articulation. A similar method of blunt dissection is then carried out anteriorly, by which means the bladder is detached as far as the prostate gland. Attention is now paid to the separation of the lateral aspects of the rectum and it is here that great care must be exercised to avoid injuring the left ureter, which adheres closely to the peritoneum as it skirts the wall of the pelvis. When the ureter has been defined it should be carefully freed as far as the base of the bladder. On the right side the ureter need not be seen. The dissection is then carried downwards on either side and the lateral ligaments of the rectum are divided with scissors. In these structures the middle hæmorrhoidal arteries are found but seldom require a ligature. This lateral dissection is carried down to the upper surface of the levatores ani. When the rectum has thus been freed on all sides as far as the points indicated, the whole of the detached structures are crowded down into the pelvis and covered with sterilised gauze. Provided that the divided end of the colon has been firmly closed considerable pressure may be made upon it from above without fear of leakage. The edges of the pelvic peritoneum are now sutured so as to re-establish the pelvic floor. This having been done, the pelvis is thoroughly flushed with saline solution and the abdominal wound closed. The patient is now turned over and placed in the right lateral and semi-prone position so that the perineal portion of the operation can be proceeded with. A purse-string suture having been inserted round the anus to prevent escape of its contents, a transverse incision is made at the level of the sacro-coccygeal joint and from the centre of this a median incision is carried down to within an inch of the anus. From the lowermost extremity of the latter a semicircular incision is made round the anus on either side, meeting anteriorly at the central point of the perineum. These last incisions should include as wide an area of skin as possible so as to insure excision of the zone of downward spread. After reflecting the skin on either side to the requisite extent, the coccyx is removed and the interval between the levatores ani defined. These muscles should be divided as far outwards as their origin from the "white line" so as to include the lateral zone of spread. The remainder of the fascia propria of the rectum is then detached from the lower part of the sacrum when the pelvic colon and the rectum, which lie loose in the hollow of the sacrum, can be drawn out of the wound. The lower part of the rectum is then dissected from the prostate or the vagina, as the case may be, care being taken to remove the cellular tissue in its vicinity as freely as possible. The resulting chasm is then freely irrigated with saline solution and all bleeding vessels are tied. Finally, the skin margins are brought together with sutures and a large drainage-tube is inserted in the anterior and the posterior extremities of the median incision. The patient is now turned upon his back and as the final step of the operation a small opening is made into the extruded bowel to allow of the escape of flatus.

The operation thus performed takes from an hour and a quarter to an hour and a half and, so far as my experience goes, the patient suffers from no more shock than after an ordinary perineal excision.

The mortality after the operation appears to be high, but it must be remembered that the disease for which it is performed claims a mortality of 100 per cent. if left alone and of over 90 per cent. from recurrence when cperated upon by the perineal methods. The causes of death in my cases have been: one from hypostatic congestion of the lungs, one from strangulation of a knuckle of small intestine which had become herniated through a rent in the peritoneal pelvic floor, one from gangrene of the stump of the pelvic colon below the colostomy, and two from peritonitis. With the exception of the first named I regard all these causes of death as preventable with further experience of the operation and with improved technique, and therefore hope that in a future series of cases I shall be able to show a lower degree of mortality than 41·6 per cent.

Upper Wimpole-street, W.

A NOTE ON THE TREATMENT IN A CASE OF ARTHRITIS DEFORMANS.

BY FREDERICK BOOTH, M.D. ABERD.

THE treatment of arthritis deformans is at the present time so unsatisfactory that I have no doubt anything new which has proved successful even in one case will be of interest to the readers of THE LANCET. As there are several recognised varieties of the disease which are probably produced by different causes it will be necessary before describing the treatment to give a brief outline of the case to which I refer.

The patient, a female, aged 29 years, had previously to the attack always enjoyed good health and was strong, robust, and of a cheerful temperament, and there was no history of gout or rheumatism in the family. In January, 1907, she had a mild attack of influenza followed by slight swelling of both ankle-joints which was accompanied by considerable pain felt especially during the night. In February swelling and pain occurred around the first metacarpophalangeal joint of the right hand, the symptoms coming on suddenly, lasting for a few days, and then as quickly disappearing, these attacks recurring at first at long intervals but as time went on more frequently, lasting longer, and leaving considerable thickening of the tissues around the joint. Then the other joints, gradually, one after another, became affected in the same way and somewhat in the following order—namely, the shoulder, the knees, the elbows, the hips, the jaws, and the spine, until there was hardly one joint in the body which was not more or less attacked by the disease. At first between the attacks there was very little impairment of movement or sign of the interior of the joint being affected, but in the latter stages effusion, especially in both knee-joints, took place. At an early stage of the disease neuralgia appeared, first in the ulnar and circumflex nerves, and gradually extended over the body, the pain and tenderness, though not as a rule severe, being very persistent. Constipation was marked from the onset and the motions became offensive and slimy, although up to that time the bowels had been quite regular. The temperature, though at first only occasionally raised above normal, became persistently so in October, when it generally ranged between 100° F. in the morning and 102° in the evening. Emaciation and anæmia were only slightly marked until the fever became constant, when both increased with moderate rapidity. The urine throughout the attack was normal.

At the commencement of the illness aspirin gave great relief, but this eventually lost to a great extent its good effect, whilst other drugs or external applications, though sometimes relieving the pains, had no effect whatever in stopping its progress. On Jan. 24th I advised the washing out of the colon daily with a four and a half feet œsophageal tube, using three quarts of warm water in which two tablespoonfuls of Epsom salts were dissolved, the tube being connected with a Higginson's syringe and the water pumped into the intestines as it was gradually inserted, no difficulty being experienced in thus using it. The lower bowel was by this means thoroughly irrigated and the motion which was for the first fortnight offensive and contained a large quantity of mucus gradually improved and became normal. In order to relieve and to disinfect the small intestine a tablespoonful of castor oil was given every morning by the mouth and two compound beta naphthol tabloids B.W. were given three times a day. Nova aspirin was given in 10-grain doses twice a day as the symptoms improved, and later hæmatogen was found to be very beneficial in relieving the anæmia. From the commencement of the washing out of the colon, as above described, the whole of the symptoms improved rapidly, and in a few days the fever and neuralgia had disappeared, the appetite had improved, and the emaciation was less marked. The joints also gradually became less painful and tender and the swelling and effusion slowly subsided. The intestinal lavage was kept up daily until March 14th, then three times a week until May 17th, when the patient went to Buxton, where she is now under the care of Dr. C. W. Buckley, who informs me that the lavage as above described has been gradually reduced to once a week, and the only joint to any extent now affected is the knee, which is improving under subcutaneous injections of fibrolysin.

The above case clearly proves that the disease in this instance was produced from poison generated in the intestinal canal mainly in the large gut. That the small intestine was also infected by the poison was, I think, shown by the fact that when the beta naphthol was not given the motions became more offensive and the improvement for the time was slower. The almost instantaneous disappearance of the neuralgia and rapid diminution of the emaciation were, I think, to be accounted for by the fact that about one-fourth of the water introduced by the tube was retained and this would no doubt be rapidly absorbed and together with the improved appetite would help to fill up the tissues and the salts contained in it would, as I have often found, relieve the neuralgic pains.

St. Anne's-on-the-Sea.

STREPTOCOCCAL ("SEPTIC") THROATS.

BY J. O. HOLLICK, M.B. DURH., M.R.C.S. ENG., L.R.C.P. LOND.,

MEDICAL OFFICER TO THE MIDLAND COUNTIES IDIOT ASYLUM.

IN April, 1908, an outbreak occurred at the Midland Counties Idiot Asylum of a pharyngitis and tonsillitis of an infectious nature, at first thought to be due to the Klebs-Löffler bacillus. Subsequent examination of swabs from the infected throats showed, however, an absence of diphtheria and diphtheroid bacilli but plentiful growth of both streptococci and staphylococci. The examination of swabs was kindly undertaken by Professor R. F. C. Leith, of the pathological department of the University of Birmingham, to whom my best thanks are due for most careful and repeated examinations. The epidemic at first occurred in the nursing staff, a female nurse showing signs of the trouble. It rapidly spread to other nurses on the female side and then to the male nurses, after which several of the male inmates were affected.

The general symptoms are as follows. There is a feeling of malaise, pains in the back and in the neck up to the occiput, and violent headache in a few cases; no vomiting or other abdominal symptoms. The evening temperature often rose to 104° F. and the morning temperature to 100°. With regard to the throat symptoms, there were slight soreness on one or both sides and difficulty of swallowing; the submaxillary and glands adjacent to the angle of the jaw and in the triangles of the neck were slightly enlarged and tender. On inspection one or both tonsils showed creamy-white secretion with angry-looking areola of inflammation extending to the anterior pillar of the fauces and the uvula was often swollen and intensely œdematous. No points of follicular exudation from the tonsils were noticeable. The urine was febrile and in some cases showed a slight trace of albumin, disappearing, however, in from two to three days; no casts or blood were present. The exudation rarely extended beyond the anterior pillars of the fauces to the front nor beyond the posterior pillars behind, but much muco-purulent secretion was observed to exude from the lymphoid follicles over the vault of the pharynx; and signs of nasal obstruction pointing to a general engorgement of the lymphoid tissue around the posterior nares and extending through the nares anteriorly were often evident. The exudate in no case extended over the soft palate or uvula. In from two to four days, according to the severity of the infection, the symptoms and local signs decreased, the glandular swelling and tenderness in the triangles of the neck and at the angle of the jaw remaining for some days or weeks after the clearing up of the throat symptoms. In connexion with this epidemic two cases of cutaneous erysipelas of the foot and leg occurred: both patients had slight abrasions of the skin previously, one of the skin between the toes and one of the skin over the dorsum of the foot. The temperature of both cases at once rose to 103° and 104° respectively. 20 cubic centimetres of antistreptococcic serum (Lister Institute) were administered subcutaneously into the skin over the abdomen. A marked fall of temperature occurred in each case during the next 24 hours, with, however, little abatement of the local signs of cutaneous inflammation; neither case suppurated, but convalescence was tardy owing to extremely slow subsidence of local inflammatory signs. Several of the patients with the throat symptoms and glandular enlargements showed a tendency to relapse if allowed to get up within too short a period of subsidence of

VOLUME TIGHTLY

temperature; the relapses in these cases, however, were never so severe as the primary manifestations, 48 hours in bed again bringing the temperature to normal.

With regard to treatment, all these cases were isolated at once on rise of temperature, however slight, or on complaint of soreness of throat, and owing to this precaution in a colony of 160 people only 15 were affected with the malady. Formalin tablets were vapourised daily and freely in all dormitories and day rooms while the inmates were out of doors. Formamint lozenges were sucked (three a day) by all not affected, and by those affected a lozenge every three hours, while frequent swabbing of the tonsils and pharynx with "izal" solution (suitably diluted) was resorted to. All cups, spoons, &c., used by the affected inmates were sterilised in formalin solution after use. In addition to the swabbing, spraying of the pharynx and nares with the formalin spray was also carried out. I might mention that the place where this outbreak occurred is situated in a healthy part of the country 800 feet above sea level, where drainage and other sanitary arrangements are carried out on the most approved and modern lines. There are no poultry or cattle, &c., kept near the premises.

No sooner had this epidemic abated than one of a similar but more severe nature occurred in my practice here at a private preparatory school, consisting of 40 pupils with staff of masters, head master's family, servants, &c., numbering upwards of 60 people in all. The building is healthily situated, 400 feet above sea level, in the country, and remote from any other dwelling. The sanitation of the whole building had just been completed at a cost of £200, with drainage into a "septic tank" some distance from the building. A few fowls, horses, pigs, cows, &c., are kept near the premises, but there is allowed no offensive accumulation of excreta from these sources. The analysis of drinking-water was satisfactory. The pupils live an out-of-door life as much as possible and practically at this time of the year (May and June) are only indoors at lessons, meals, and to sleep. The building is constructed with the view to the admittance of as much light and fresh air as possible; all windows open widely and are kept open as much as existing conditions of weather permit. There was a history, before the commencement of the epidemic, of one boy returning to school who had had sore throat which had imperfectly cleared up. In from two to three weeks later a boy was seized with convulsions. I saw him soon after the abatement of the seizure. His temperature was 103° F.; he complained of no sore throat, but his cervical glands were enlarged and tender. He was isolated at once. On seeing him next day he had a creamy secretion over both tonsils but not extending on to the palate, uvula, or faucial pillars. There was much angry congestion over the latter, and he now complained of much difficulty and pain on swallowing.

Four other boys on this day were put to bed with rise of temperature, tenderness over the cervical glands, headache, malaise, and some pain on swallowing on one or both sides. One of these showed much more cervical glandular enlargement and had a more suspicious look about his fauces and tonsils than the rest. Moreover, he had signs of much nasal obstruction and he was isolated. A swab from his throat showed Klebs-Löffler bacilli. He was treated with 4000 units of antitoxin, swabbed with izal, sucked formamint lozenges, and the usual treatment was carried out by both night and day nurses. He proved to be a severe case of diphtheria of the fauces and nares, with marked heart and kidney trouble, and succumbed 14 days after onset of symptoms to cardiac failure.

Swabs from other throats showed Hofmann's diplococci and streptococci but no diphtheria bacilli. Boys fell down like ninepins, whole classes going sick one by one, all with similar symptoms and local signs. One boy, and only one, had middle-ear trouble ending in suppuration, with no mastoid complication. Repeated swabs were taken for examination. The specific bacillus was only found in one other case of the 30 affected, and in this boy local throat signs were slight, but he was isolated and had no ill after-effects; in fact, his malady was of so slight an importance to him that he never really complained of feeling ill. He had no abnormal gland swelling and no nose trouble. A feature of this epidemic and one that was so very striking that the veriest tyro on throat affections could not have failed to notice it, was the comparative slightness of the internal (tonsillar and pharyngeal) signs in the older boys of from 12 to 14 years of age, with in some cases no secretion or exudation, and the mildness of their constitutional symptoms; while the younger boys of from 10 to 12 years of age had sharp febrile disturbance, with much pain in the throat and glands and took much longer time to convalesce, whilst the subsequent anæmia was often very marked. Some showed signs of heart dilatation, some had none. Most had tenderness with swelling of the glands at the angle of the jaw and around the sterno-mastoid. In some cases slight, in others very marked, glandular enlargement was noticeable, taking many weeks to subside to the normal. Some, again, had albuminuria, mostly of a very transient nature, only lasting from three to four days. Some had none, and in no non-diphtheritic case was there a true nephritis or endocarditis. One boy in whom a tonsillotomy had been done a year or so previously acquired the disease and had a very sharp attack. Several of the cases developed dilated hearts with apex beat well out in the mid-axillary line. This complication, however, cleared up with prolonged rest. Appetite was good, almost ravenous, even though much secretion and faucial swelling were present; headache was persistent in a few cases, little or absent in most. There was no doubt about the izal swabbings and sucking of formamint doing good in checking the amount of secretion and local pain on swallowing. Several cases had to return to bed after getting up in the dormitory for a short time after the temperature had been normal for several days and secretion had disappeared. This was in most cases due to a secondary adenitis in the cervical glands, even in those who had had previously but slight gland trouble, yet the relapse was often more severe than the primary adenitis and much more obstinate in clearing up. No case went on to suppuration. In several the pharyngeal tonsil and adjacent lymphoid tissue showed signs of congestion for from two to three weeks after disappearance of throat discomfort and the nares were in a few cases slow to resume their normal appearances. Some made rapid strides in convalescence, others remained anæmic for from three to four weeks, and in one case, after the boy had been sent home and had been resting in open air for three weeks after the attack, news was received of his having to take to bed again with rise of temperature and return of his former gland symptoms.

This all points to the persistence of the infection even after a period of apparent normal health; the streptococcus, no doubt, can linger on in the remote parts of the fauces, nares, Eustachian tubes, and query in the cervical glands even after all symptoms of the affection are past and done with. Hæmatogen and maltine with iron ("bynophosphates") seemed to do most good as an after tonic, and the incidence of warm sunshine in the latter part of June seemed to put a check to the spread of the infection. A notable feature of the epidemic was a slight pharyngitis experienced by the adult people (masters and servants) of the school with no serious constitutional disturbance; this was not fanciful but real, as I had an opportunity of examining the fauces of those affected.

My reasons for reporting these two epidemics are, firstly, the now well-understood possibility of a "diphtheritic" supervening on or accompanying a "diphtheroid" infection; and, secondly, of a streptococcal infection (with staphylococcal) going hand-in-hand with both and gaining sometimes the upper hand, and so minimising the risks run had the former reigned alone supreme, and that none the less is a streptococcal throat infection to be treated lightly, owing to the persistent and clinging properties of the micro-organism resulting in much adenitis and subsequent constitutional disturbance and anæmia.

I had almost hoped for a case of scarlet fever to crop up during the course of this epidemic to add further evidence to the well-known "possibilities" of micro-organisms of the streptococcal group. My expectations were ultimately realised, for in a family of six children residing in an isolated country cottage five developed streptococcal throats, all females, while the sixth child, a boy, aged six years, developed true scarlet fever in a very typical form: he desquamated freely and in eight weeks had finished peeling and was in good health. From the three epidemics, then, described above, in three separate households, streptococci were found to be present in the throat swabs in all three instances, and the possible and various results of streptococcal infection were well illustrated in the production of a tonsillitis, an erysipelas, and scarlet fever.

Knowle, Warwickshire.

LUME TIGHTLY BOUND

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

SURGICAL SECTION.

X Ray Examination of the Urinary Tract.

A MEETING of this section was held on Dec. 8th, Mr. WARRINGTON HAWARD, the President, being in the chair.

Dr. W. IRONSIDE BRUCE read a paper on a system of X Ray Examination of the Urinary Tract. He said that, taking the x ray as produced and looking upon it as a source of light emanating from a point referred to as the anode of the tube, the radiogram was a shadow cast upon a photographic plate of those parts of the body that were opaque to the x ray. In dealing with ordinary light shadows might give false impressions of the objects which cast them, and in the case of x ray shadows of the renal region that fact claimed specially to be borne in mind. If these x ray shadows were to be used as a means of recognising any existing abnormality it was surely necessary as a preliminary that an accurate knowledge of the normal x ray appearance presented by this part should be acquired. In order to gain this knowledge it was of the greatest importance that the shadow secured of the part should always be the same. In other words, the anode of the tube should always bear the same relation to the part at the time of irradiation. In his method the anode of the tube was readily and easily placed in an accurate anatomical relation to the part to be examined by means of a very simple mechanical contrivance. In the case of the renal region it was placed immediately below the spine on the second lumbar vertebra. In every case this relation between the anode of the tube and the spine of the second lumbar vertebra was maintained and, since the kidneys and the ureters usually bore a definite relationship to the bones of the part, a radiogram showing up these structures would demonstrate the shadow relationship which they bore to the bones. In order to secure a proper knowledge of these relationships the pelves of the kidneys and the ureters of a post-mortem subject were injected with an emulsion of bismuth. A radiograph was then secured of the renal region of the subject, the anode of the tube being in the usual relation to the second lumbar vertebra. By means of the radiogram thus secured the shadow relationship of the kidneys, right and left, and of the ureters was worked out. The position of the subject was also of great importance. The patient was placed, lying face downwards with his arms by his side, on a canvas-topped couch under which the tube was arranged, and in order to restrict, so far as it was possible to do so, the movements of the diaphragm and consequently of the kidneys, a pad or compressor was placed under the abdomen with the whole weight of the patient resting upon it. The compressor pushed the abdominal contents away from the renal area and allowed the more perfect illumination of these parts. It was often difficult to secure a radiogram of good quality, sometimes on account of the density of the subject and sometimes owing to the vagaries of the patient. The latter were usually overcome by frequent examinations or by administration of an anæsthetic. With regard to the first-named cause it was not always the most obese subjects that were the cause of failure; more often it was the stout subject with considerable muscular development. The use of an abdominal compressor combined with frequent examination and effective evacuations of the intestine, usually resulted, however, in a radiogram of good quality, even in the most obese subject. A radiogram of good quality should show the following points: it should be absolutely symmetrical; the lumbar vertebra should be sharp and distinct in outline; the margin of the psoas muscle easily made out; the twelfth rib well defined; and the outline of the kidney on either side discernible. If such a radiogram were secured there was no reason why a positive or negative diagnosis might not be absolutely relied upon, but in a case where the radiogram was not up to the standard it was the duty of the radiographer to state this fact, so that the diagnosis, positive or negative, might be valued at its true worth. In order to bring renal examinations to a successful conclusion it was essential that the examination should not be carried out in a hurried manner, for not only was it necessary to have the intestine properly emptied but time should be allowed for re-examination, not once but two or three times if necessary. It was often insisted upon that the radiographer should be in possession of all the clinical facts of the case before making his examination. Although a knowledge of the clinical history was desirable, yet it was much better that at the time of examination the only knowledge possessed of the case should be that it was one of supposed calculus in the kidney or ureter. By approaching the case in that manner the radiogram secured could be viewed with an entirely unbiassed mind, and an examination in every case of the whole of the urinary tract became absolutely necessary. A provisional diagnosis having been made radiographically, the clinician could then compare his conclusion with that arrived at by the x ray examination. Thus the value of clinical observations in such cases was considerably increased. Further, it was of the utmost importance that neither the clinical nor the x ray evidence should be put in a place of first importance. The radiographer was wrong who stated that x ray evidence was infallible and, on the other hand, the clinician was surely equally wrong who advocated operation in the face of strong x ray evidence to the contrary. It was always advisable, if possible, to bring one into line with the other. Any increase in the size of the outline of the kidney, when observed in a case of suspected renal calculus, might assist the diagnosis—for example, in the case of a boy who had had attacks of renal colic associated with pus in the urine. Calculus was suspected but on x ray examination the outline of one kidney was markedly increased in size and no opacity was to be made out suggesting the presence of calculus. From an x ray point of view the diagnosis in this case was tuberculous kidney with renal colic from the passage of pus and débris through the ureter. As a matter of fact, such was the condition of affairs on post-mortem examination. If, moreover, there was more than one calculus present in a case this fact might be noted and the position of the calculus or calculi in relation to the pelvis or the cortex of the kidney might be indicated. The condition of the sound kidney, provided the outline of it could be made out, might also be deduced from the size of the shadow cast by it. In conclusion, he trusted that from what he had shown them of the work of the radiographer in connexion with the diagnosis of renal calculus, they would appreciate some of the difficulties with which he was faced and that they would see that he had striven to some purpose to remove this method of investigation from the realm of mere mechanics to a branch of the profession that must be recognised as a permanent and essential factor in the accurate diagnosis of disease of the urinary system.

The paper was discussed by Dr. G. H. ORTON, Mr. W. G. SPENCER, and Dr. N. S. FINZI, after which Dr. BRUCE replied:

THERAPEUTICAL AND PHARMACOLOGICAL SECTION.

The Treatment of Rheumatism.

A MEETING of this section was held on Dec. 1st, Dr. F. H. BURTON BROWN, the President, being in the chair.

Professor RALPH STOCKMAN read a paper upon the Treatment of Rheumatism. He showed and analysed a large number of charts illustrating the prompt fall of temperature which resulted when the patient came under the influence of salicylate of sodium. When the initial fall was partial or slow, an increase in the amount of the drug would usually cause the temperature to fall completely. He also showed charts illustrating the action of drugs closely allied in pharmacological composition—salicin, salicylate of methyl, &c. In one group of cases of rheumatism the synovial membranes of the joints were alone or principally involved; in a second group of cases, which were more chronic and less amenable to treatment, there was much involvement of the surrounding fibrous structures, the tendons, and fasciæ. In the latter much larger doses might be required.

Dr. D. B. LEES read a paper in which he maintained that the present treatment of acute rheumatism was unsatisfactory and inadequate because, failing completely to arrest the disease, it despaired of any beneficial influence on the heart and was content to alleviate the painful arthritis. He advocated the use of large quantities of salicylate of sodium,

always combined with twice the amount of sodium bicarbonate. The initial dose for an adult should be 150 grains daily, with a daily increase of 20 to 50 grains until the temperature fell and remained normal. Unpleasant symptoms should be followed by a temporary reduction of the dose, and when these disappeared the drug should again be cautiously increased. Sodium salicylate was not a cardiac depressant. Two precautions were necessary: to give sufficient bicarbonate of sodium to render the urine alkaline and to prevent constipation. Under this treatment the dilatation of the left ventricle rapidly disappeared. In rheumatic pericarditis and myocarditis the application of an icebag was of great assistance. If there was evidence of dilatation of the right auricle this must be relieved by leeches before the ice was applied.

The PRESIDENT, Mr. W. J. MIDELTON, Dr. F. J. POYNTON, Dr. W. H. WILLCOX, Dr. J. GRAY DUNCANSON, Dr. H. C. CAMERON, and Professor W. E. DIXON joined in the discussion which followed.

MEDICAL SOCIETY OF LONDON.

Athletics in Relation to Disease.

A MEETING of this society was held on Dec. 14th, Mr. C. B. LOCKWOOD, the President, being in the chair.

Mr. R. H. A. WHITELOCKE (Oxford) read a paper on Athletics in Relation to Disease. In the course of his remarks he said that when the twisting or wrenching violence was sufficient to overstretch the ligaments of a joint but not to tear them, so that the only symptoms were pain and impaired movement, the condition was known as "strain." When laceration resulted and there was bleeding into the tissues, and added to the pain and loss of function they had swelling, the term "sprain" was used. Sprains were divided into articular and muscular. Articular sprains might be simple or they might be complicated by fracture or gross injury to nerves or by semi-luxations in the joints. When the sprain was complicated by an injury to the bone entering directly into the joint it was called a sprain-fracture or fracture-sprain. If in addition to the sprain of a joint there was a fracture of one of the bones in the immediate neighbourhood but not involving the joint itself the expression sprain with fracture might be used. That classification for clinical purposes was a convenient one, especially when treatment was considered. In the simplest variety known as strain the patient came complaining of pain and loss of power. The pain might be very intense. The first desideratum of treatment was relief of pain, and nothing succeeded so well as rest to the injured part, and that was best obtained by means of strapping. Various forms of plaster were used for that; the best, he thought, were leucoplast and wash-leather plaster. Massage over the plaster would expedite the cure in the later stages. When, however, there was swelling coming on immediately it was due to hæmorrhage; when later, by some hours, it was due to serous effusion and was known as deferred swelling. The first requirement was that the effusion should be prevented or checked, and when it did exist to assist by every means its reabsorption. Electric pressure was as useful for these cases as it was in contusions and should be applied as soon as possible. If the surgeon was fortunate in seeing the case early he might be able to limit the bleeding considerably and might certainly prevent in a great measure the serous effusion coming on later. Speaking generally, every hour saved before treatment was begun meant a saving of days in the total period of treatment. Fixed apparatuses and rigid splints should never be used. Joints were designed for movement and should never therefore be treated like fractured bones. A joint which was left alone untreated would in the long run do even better than one that was kept in splints for a considerable time. Examples of that were often to be found in the sprains in the lower animals. The system of placing sprained joints and retaining them in splints for considerable periods was to his mind responsible for the fact that thousands of well-to-do and well-educated people as well as poorer folk flocked daily to the bone-setters and other irresponsible and unregistered practitioners. The bone-setter who moved everything by rule-of-thumb would seem to be even more successful by his haphazard methods if they were to judge by his present-day almost universal popularity. Yet both systems, the fixed and the movable, or the orthodox and unorthodox, would seem to be wanting in something. A scientific discrimination was absolutely necessary if success was commonly to follow treatment, for each case must be judged according to its merits. The once prevalent idea that every injured joint required rest was dying hard, just as it was to be hoped that the more modern idea that everything should be moved would find its limitations, for to subject every injury to early massage and movement would be found to be no less injurious. And more particularly was that true when they took sprain-fractures into consideration, and those sprains which were complicated with gross injuries to nerves. Early massage and movements might do much harm by increasing bony callus and thereby producing stiffness of the joints in cases where there was fracture, and the recent and now almost universal employment of the x rays had taught them that a great many injuries formerly regarded as simple sprain were in reality sprain-fracture.

Dr. W. COLLIER (Oxford) said that he always advised an undergraduate to let his athletic career be a short one, as his early athletic struggles developed well-marked hypertrophy of the left ventricle and there was always a danger that if he continued his efforts over too long a period he ran a very decided risk of inducing a dilatation of the aorta which might end in incompetence of the aortic valves.

Sir LAUDER BRUNTON said that they did not yet know how far albuminuria caused by over-exertion might ultimately lead to kidney damage but he did not think that that was likely to be of much importance because the organ that was most likely to suffer first was the heart and alterations in it would probably prevent the indulgence of athletics to any great extent before the kidney itself had suffered. It was, however, clear that athletics without previous training might be very injurious, and that over-strain, especially in growing boys, might lead to cardiac weakness which might ruin their future lives. It was therefore very advisable that all those who took part in athletics, whatever their age or their sex might be, should be subjected to careful medical examination unless they were willing to take the risk of doing themselves great damage. Such examination was all the more important if athletics, gymnastics, and physical training were introduced as part of the curriculum in all schools.

Dr. SAMUEL WEST pointed out that if massage of a sprained joint caused pain that persisted, then such treatment was doing harm.

Dr. F. DE HAVILLAND HALL described how dilatation of the heart might occur in cycling, horse-riding, and in athletic competitions.

Dr. A. F. VOELCKER considered that they must distinguish in athletics the different forms according to their gravity from a medical point of view.

The PRESIDENT described a case in which the patient fractured the right humerus when throwing a cricket-ball, and Mr. WHITELOCKE replied.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.

The Therapeutic Uses of Sea Water.—Treatment of Rheumatic Affections by Counter-irritation of the Spine.

A MEETING of this society was held on Dec. 9th, Mr. ERNEST SOLLY (Harrogate), the President, being in the chair.

Dr. ARTHUR W. BRODRIBB (Hastings) read a paper entitled "The Therapeutic Uses of Sea Water." In explaining the choice of his subject he commented on the lack of enterprise of the South Coast towns in not making a greater use of sea water for therapeutic purposes, and said that it was done very largely abroad, particularly for scrofulous diseases and diseases of the female generative organs. He was of opinion that sea water might be applied as douches, sprays, and brine baths, after dilution or concentration for the benefit of other diseases, such as rheumatism, joint exudations, glandular enlargements, some skin diseases, and particularly for diseases of the respiratory tract, the last owing to climatic advantages.—Dr. A. F. STREET (Westgate) said that the argument as to the undoubted utility of treatment by the water of inland spas applied quite as forcibly to that by sea water, with or without the addition of seaweed. It was not right to question the value of the latter any more than that of the former, merely because in

neither case was that value fully explicable by their present knowledge.—Dr. A. C. GURNEY (Eastbourne) was of opinion that one important therapeutical point not touched on in Dr. Brodribb's paper was the fact that in sea bathing there was a mechanical stimulation of the skin by the impact of the spray or surf and the movement of the water which gave it an important advantage over the brine baths of inland spas in a certain class of cases.—Dr. C. W. BUCKLEY (Buxton) considered that the cause of sea water baths for medicinal purposes would not be advanced by the argument that since sea water contained more dissolved substances than some mineral springs it must be more potent. The constituents to which mineral waters owed their undoubted efficacy had not yet been definitely ascertained.

Mr. W. J. MIDELTON (Bournemouth) read a paper on the Treatment of Rheumatic Affections by Counter-irritation of the Spine, in which he said that he was firmly convinced that continuous counter-irritation in the neighbourhood of the cervical and lumbar enlargements of the spinal cord was a powerful means not only of producing a beneficial effect on the nervous system but also of eliminating germs and toxins. He gave a short history of the method and mentioned other practitioners who had adopted it with success. He had treated 27 cases of polyarticular rheumatoid arthritis in both the early and late stage, three cases of paralysis, and two of hysteria by this method with marked success. He read notes of four of his more recent cases. He showed a patient who had been restored to health and freedom of movement by this means under the care of Dr. S. G. Champion and read notes of other cases treated by him and Mr. A. B. Batley.—Dr. A. P. LUFF (London) stated that the results of his experience of applying blisters to the region of the spine in the treatment of various diseases of the joints did not compare altogether favourably with other methods of treatment.—Mr. W. ARMSTRONG (Buxton) said, holding the view that in all cases of arthritis there was more or less interference with the nerve-nutrition of the joints, he had for the last 12 years given special attention to the treatment of the so-called "joint centres" in the cord. At first the applications were of mustard bran, acetic acid, and other counter-irritants; later the blistering treatment advocated by Mr. Midelton, which he had used thoroughly in 16 cases, all severe examples of definite rheumatoid arthritis, more or less improvement taking place in every instance. For the last four years he had substituted the electric cautery. The applications, which should not make skin lesions, were made to the sides of the cervical enlargement in affections of the upper limbs and of the lumbar enlargement where the lower extremities were involved. He did not put this method forward as an actual specific for arthritis nor did he suggest that it precluded the necessity for careful elimination of all reflex sources of irritation, such as gastric and intestinal intoxications, the various sources of septic poisoning, uterine and general nervous derangements; but he could say that since using this method his results in the treatment of a considerable number of cases of this most intractable disease had shown remarkable and most gratifying improvement.—Dr. BUCKLEY said that he had given the methods under discussion a fair trial and had come to the conclusion that counter-irritation of the skin over the spine, whether by blisters or, as he preferred, by Paquelin's cautery, certainly alleviated pain; but he had found no evidence of any curative effect, nor did he think it likely that a disease which undoubtedly was due to bacterial action could be cured by such means.—Dr. A. MANTLE (Harrogate) said he did not favourably regard the treatment.—Dr. R. LLEWELYN JONES (Bath) spoke in support of the paper.—In his reply Mr. MIDELTON said that before submitting to the treatment by counter-irritation of the spine many of Dr. Champion's and his own patients had conscientiously tried every kind of treatment at home and abroad. Local disease was always looked for and treated if found.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

Mammary Carcinoma.

A MEETING of this section was held on Nov. 27th, Mr. JOHN LENTAIGNE, the President, being in the chair.

Mr. EDWARD H. TAYLOR read a paper on Mammary Carcinoma and its Surgical Treatment. There was no region of the body, he thought, where so much had been learnt in recent years of the mode of the spread of cancer as in the breast, nor was there any region where more satisfactory results had been obtained by improved operative measures. What he had to say would have reference to the ordinary scirrhous form of the disease. Cancer first appeared as a small nodule in the breast, which gradually extended until it involved the whole of the breast and the adjacent tissues. There were also the lymphatic extensions, and the extensions which took place by the blood stream. For a long time the extension of cancer to lymphatic glands had been well known, and they instinctively examined for enlarged lymphatic glands in order to gain a correct idea of the extent of the case. The cancer might also extend along the lymphatic vessels in a way which had been described by Mr. W. Sampson Handley of London, and to that gentleman he was indebted for the slides which he would show in illustration of the spread of cancer by the lymphatics.[1] [Slides showing the various methods of extension were exhibited.] As to the treatment of cancer, his experience was that the cases of breast cancer usually met with were not favourable for a complete operation. He regarded as a favourable case one in which the disease was confined to the breast and in which there was no evidence of disease of the skin or of enlarged glands. If they found enlarged glands in the axilla they might regard the case as a late one in which the disease had travelled far, and such were the majority of cases which came to the surgeon. Until they got cases in earlier stages they could not hope for ideal results in treatment. The delay was largely due to the fact that it was very difficult at an early period to say that the case was one of cancer and the signs that they relied upon were really late signs. Another cause of delay was that patients put off seeing the medical practitioner until the symptoms had assumed a serious aspect. They should never hesitate to make an exploration by an incision along the outer periphery of the breast, cutting out a wedge-shaped mass which included the suspected swelling. He did not recommend cutting into the tumour to see if it was cancer. It should be cut out altogether. If the disease had involved the skin, if it was adherent to the chest wall, if the glands of the axilla were extensively enlarged, and if the glands in the supra-clavicular region were enlarged also, he did not believe there was any prospect of a permanent cure by operative measures. [Slides were shown in illustration of the stages of the radical operation.] In the case of limited disease the wound could be closed by suture, but in later stages a grafting or autoplastic operation might be necessary. The arm should always be left free so that the patient had a good range of mobility and could gradually get to use it. A great improvement had occurred in the operative treatment of such cases. Some operators had given their successes as 40 per cent. or more. He was afraid that he could not lay claim to such satisfactory results. He had had recurrences in patients more than three years after operation. The knowledge of the extension of breast cancer had been an extremely valuable acquisition to surgeons, and in view of what Mr. Handley had so ably described they should impress people with the importance of seeing a medical man at the earliest possible moment when any tumour appeared in the breast. If they were to get good results in the future he thought that it would not be by any further extension of the operation but by early and correct diagnosis.

Mr. WILLIAM TAYLOR emphasised the difficulty of diagnosis and recommended strongly that the general practitioner and the gynæcologist, who saw the case earlier than the surgeon, should be impressed with the fact that at least five out of six women with a lump in the breast were suffering from cancer. The earlier the age the more active was the growth in the breast. Recurrence had been found up to 12 years after operation.

Mr. K. E. L. G. GUNN said that his own practice was to remove more skin than Mr. Taylor thought necessary. He only removed the greater pectoral if he could not clean the axilla without its removal.

The PRESIDENT said that they should strive to impress on educational authorities that it was more important for a girl to understand her health than to understand algebra, and one of the lessons a girl ought to be taught was the absolute necessity of attending at once to a lump that appears in the breast, or anywhere else. The danger was

[1] THE LANCET, April 8th (p. 909), 15th (p. 983), and 22nd (p. 1047, 5.

all the greater because such a lump was nearly always painless. They did not know the laws governing the spread of cancer, and he had been particularly impressed with the danger of cutting into a cancer. For many years he had removed both pectoralis major and minor. Recurrence was rare in the site of the operation but frequently occurred in other parts of the body.

Mr. E. H. TAYLOR, in reply, said that he brought forward the communication to emphasise the importance of carrying out the most complete operation, even where the disease was of quite small dimensions, and to emphasise the importance of early diagnosis.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Dec. 3rd, Mr. R. F. Jowers, the President, being in the chair.—Dr. Walter Broadbent showed a girl, aged 14 years, with severe Mitral Regurgitation, in whose case there was no history of rheumatic fever, chorea, or scarlet fever, but only of growing pains and pain in the feet for which she had recently been given flat-foot pads. He had brought up the case to show the necessity of examining the heart in children with "growing pains." He also showed a Stomach with Congenital Hypertrophic Stenosis of the Pylorus from a child six weeks old. The child weighed 11 pounds at birth; it was nursed by the mother. On the third day it began vomiting, and this continued up to its death. The bowels were obstinately constipated. When admitted to hospital it weighed 3½ pounds; the pylorus could not be felt and no peristalsis of the stomach was visible. It was considered too feeble for operation and died very shortly.—Dr. J. F. Gordon Dill read notes of, and showed specimens from, a case of Primary Carcinoma of the Thyroid Gland in a man aged 55 years. The man had been quite well up to a month before death, when he began to have difficulty in breathing. Two weeks later he noticed a lump in his neck, and the dyspnœa became worse with difficulty in swallowing also. The man died shortly after admission to hospital, and a tumour of the size of a Tangerine orange was found in the right lobe of the thyroid, bulging between the trachea and the œsophagus.—The President showed a Serous Cyst of the size of a bantam's egg, removed from the erector spinæ of a man who had complained of a painful lump in the small of the back for a year.—Mr. H. H. E. Scatliff read notes of a case of Atypical Leukæmia. The patient went to him for sudden hæmorrhage under the conjunctiva. He had also enlarged glands in the neck and œdema of the legs. He was very anæmic and the blood showed 2,736,000 red cells and 6300 white, but the leucocytes were found to be 96 per cent. small lymphocytes. The man became rapidly worse, having severe hæmatemesis, and died a fortnight after he was first seen.—Dr. F. G. Bushnell showed specimens of the Blood under the microscope and read a paper on this form of leukæmia, sometimes called leukanæmia. He said it was the third case that he had examined at Brighton; the total leucocytes were not increased in number but they consisted almost entirely of lymphocytes; the liver and spleen and glands were enlarged, and they and all the viscera contained large numbers of lymphocytes. The course of the disease was a severe progressive anæmia akin to pernicious.—Dr. C. F. Bailey read a paper on High-Frequency Currents and their Medical Application. He said that high frequency currents caused a microscopic battering of every cell in the body, changing too quickly to cause contraction of muscle or sensation but capable of causing inhibition, anæsthesia, and blanching of the skin. He used the effleuve mainly and found it useful in pruritus and some forms of eczema, also in neuritis and myositis, and in migraine. Anto-condensation lowered vascular tension, while spinal effleuve tended to increase it and was useful in neurasthenia.

EDINBURGH OBSTETRICAL SOCIETY.—A meeting of this society was held on Dec. 9th, Professor William Stephenson, the President, being in the chair.—A paper by Dr. T. M. Callender on Thyroid Extract as a Preventive of Dystocia from Large Child was read by the secretary. Dr. Callender attended a woman in her first confinement who was short and stout with a justo-minor pelvis. The child presented the right occipito-posterior position and had to be delivered with forceps with considerable difficulty. The child weighed 8½ pounds and was still-born. The patient suffered severely from coccydynia, the coccyx having been dislocated during labour and its removal was required a few months later. She afterwards became very stout and this was treated by thyroid extract and diet with good results. Having again become pregnant and as she dreaded the possibility of losing another child Dr. Callender administered thyroid extract five grains a day from the third month to interfere with the development of the child. The thyroid extract was taken almost continuously to full time, when she was delivered easily of a healthy child which weighed 6½ pounds, being two pounds less than the previous one. Dr. Callender had also given the same treatment in another case; the mother had had two very difficult labours due to the large size of the children, in one labour requiring craniotomy. Ten grains of thyroid extract were given daily and the result was a comparatively easy labour and a small child.—The President, Dr. H. Oliphant Nicholson, and Dr. J. W. Ballantyne discussed the paper.—Dr. Ballantyne read a paper on Pre-maternity Hospital Practice. He reviewed a quarter's series of cases in the Hamilton Ward for the treatment of morbid pregnancies in the Royal Maternity Hospital, Edinburgh. These included 30 cases, consisting of five of eclampsia, three of albuminuria, four of accidental hæmorrhage, three of placenta prævia, four of threatened abortion, two of retroversion of the gravid uterus, one of habitual fœtal death, two of phlebitis in pregnancy, one of heart disease in pregnancy, one of gingivitis, one of severe chorea gravidarum, one of gonorrhœal arthritis in pregnancy, one of contracted pelvis and vaginal cicatrisation, and one of twins with hydramnios of both sacs. There was only one maternal death, that of the chorea gravidarum. The number of cases shows that there exists a rapidly increasing demand among medical men for a hospital or nursing home where cases of morbid pregnancy can be suitably treated. It is also noted that many of the most serious cases occur in the first half of pregnancy. The observation and treatment of these conditions will develop an important branch of obstetrics both on medical and surgical lines. He advocated a separate building and staff for these cases but connected by corridor with the maternity hospital.—The President, Dr. A. H. F. Barbour, Dr. F. W. N. Haultain, Dr. J. Haig Ferguson, and Dr. J. Ritchie made remarks on the paper, and Dr. Ballantyne replied.

HUNTERIAN SOCIETY.—A meeting of this society was held on Dec. 9th, Dr. Arthur T. Davies, the President, being in the chair.—Dr. O. K. Williamson showed a case of Aortic Stenosis in a boy, aged eight years. Examination showed marked hypertrophy of the left ventricle, together with a harsh systolic murmur over the aortic area. Slight choreic movements were also to be observed.—Mr. Hugh M. Rigby showed: 1. A case of Popliteal Aneurysm cured by the Matas Operation. When first seen the aneurysm was of the size of a tennis ball. Symptoms had been noticed for three months and the swelling, which had grown rapidly, for four weeks. Œdema of the leg was present and pulsation was delayed in the arteries of the foot. At the operation the sac was laid open and two arterial openings were found 1½ inches apart. These were occluded by chromic gut continuous sutures. The rest of the sac was obliterated by buried chromic gut sutures. The wound healed well and there was no recurrence. The leg was still somewhat œdematous. Pulsation could not be felt in the arteries of the foot. 2. A case of Anterior Dislocation of the Foot treated by excision of the astragalus. As the result of operation the patient could walk without support and had fair movement at the ankle-joint. Before the operation the foot was held in the partly extended position and no movement was possible at the ankle-joint. 3. A case of Duct Carcinoma of the Breast, secondary deposits in the left humerus with spontaneous fracture two and a half years later. The right breast was removed for duct carcinoma in April, 1906. This had been noticed for five years. The axillary glands were not involved. The growth showed extensive mucoid degeneration. No local recurrence had taken place. Three weeks ago, after a slight effort, pain was felt in the left shoulder. A fracture was discovered in the upper part of the humerus with much swelling which a radiograph showed to be due to the presence of a new growth.—Dr. J. W. Bernstein showed: 1. A case of Polyarthritis in a woman with extreme deformity of the fingers. 2. A case of Disseminated

Sclerosis.—Mr. H. Lett showed: 1. A case of Osteitis Deformans. The patient was a man, aged 54 years. For six or seven years he had had pains in the tibiæ and he had had to wear caps as his head became too large for his hat. Both tibiæ were affected, as also the femora and right humerus. The characteristic curving of the lower extremities was well marked and there was kyphosis in the upper dorsal region. 2. A case of Atrophy of the Testis following an acute attack of Torsion of the Cord in a man, aged 21 years. The testis was very small and hard, and just above it a smaller lump representing the epididymis could be felt. 3. A case of Tertiary Syphilitic Periostitis of the Fibula in a woman, aged 57 years.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Nov. 17th, Dr. T. J. Wood being in the chair.—Mr. F. W. Goyder showed some pathological specimens.—Dr. F. W. Eurich gave a microscopical demonstration.—Dr. W. Mitchell in the course of some remarks on Ionic Medication gave an interesting demonstration of this method of introducing various drugs into the tissues. He thought that this method of treatment was being neglected by the general practitioner and pointed out how simple it was and what good results could be obtained by it.—Mr. James Phillips read a paper entitled "The First Three Weeks of Pregnancy and the Practical Bearing of Recent Investigations on our Knowledge of Ectopic Gestation." He quoted the recent work, from Peters's publication in 1899 to Bryce and Teacher's monograph published in October, 1908, done on the implantation of the ovum, showing that the fertilised ovum when it reached the uterus burrowed into the substance of the decidua and by setting up a coagulation necrosis opened up capillaries and thus established the maternal fœtal circulation. When the ovum was arrested within the Fallopian tube the same burrowing process and production of a necrotic zone round the ovum took place, accounting for the almost invariable termination of these cases by rupture. "The ovum in making its bed digs its own grave." Statistics were quoted showing that rupture into the lumen of the Fallopian tube and the formation of a tubal mole was a much more frequent event than intraperitoneal rupture and the importance of always thinking of tubal pregnancy in every case of sudden pelvic pain was emphasised.

MANCHESTER MEDICAL SOCIETY.—A meeting of this society was held on Dec. 2nd, Dr. A. T. Wilkinson, the President, being in the chair.—Dr. W. Milligan made a communication upon Direct Laryngoscopy, Tracheoscopy, Bronchoscopy, and Œsophagoscopy. After a brief historical *résumé* of the history of laryngoscopy he demonstrated Kirstein's method of autoscopy and pointed out its advantages in the examination of young children and in obtaining a good view of the posterior laryngeal wall. Killian's instruments were shown and reference was made to the very valuable work done in his clinic. Brüning's electroscope, telescopic tubes, and extension forceps were also shown, the demonstration being aided by numerous lantern slides and stereoscopic photographs. The position of the patient, the question of anæsthesia, and the position and duties of assistants were mentioned. The value of direct laryngoscopy as a method of diagnosis and of treatment was then discussed, illustrative cases being quoted. Tracheoscopy and bronchoscopy, superior and inferior, were referred to and various useful instruments were shown. The history of œsophagoscopy was briefly touched upon and its value in the diagnosis of many obscure lesions of the food passage was insisted upon. The following cases were demonstrated: (1) Laryngeal Fibroma; (2) a patient operated upon for Laryngeal Fibro-papilloma; (3) Laryngeal Stenosis (Syphilitic); (4) Laryngeal Lupus; (5) Hysterical Spasm of the Œsophagus; and (6) Œsophageal Ulcer (Traumatic).

HOW DISEASE IS SPREAD.—A striking instance of how disease is spread was reported at the last meeting of the Shaftesbury (Dorset) rural district council by the medical officer of health (Mr. T. F. Hanly) who stated that he had been notified of a child suffering from diphtheria at the village of Huntingford. The case subsequently proved fatal. Mr. Hanly on visiting the house of the patient found that the father was at his usual occupation of milking cows.

Reviews and Notices of Books.

Oxford Medical Publications. Selections from the Writings, Medical and Neurological, of Sir WILLIAM BROADBENT, Bart., K.C.V.O. Edited by WALTER BROADBENT, M.D. Cantab., M.R.C.P. Lond. London: Henry Frowde and Hodder and Stoughton. 1908. Pp. 444. Price 15*s.* net.

WHEN the medical history of the latter part of the nineteenth century comes to be written there can be little doubt that the work of the late Sir William Broadbent will occupy a high place in the roll of honour. A minute and accurate observer, a man of rare and varied experience, and of wide outlook, he was a great physician and one who has left a large impress, not only on the students who came under his personal influence, but also upon the medical thought and progress of his time. Fortunately, his teaching has been preserved in the many lectures, contributions, brochures, and books which he produced, the list of the titles of which occupies nearly nine pages of this book before us. By collecting together into one volume some of the more important and characteristic of his lectures and publications his son, Dr. Walter Broadbent, has laid the profession under a debt of gratitude and has produced a worthy monument to his father's memory.

The various papers are on widely diverse subjects and were published at different periods of Sir William Broadbent's career. Some, as the editor informs us, are included in the present volume for their historical interest, others for the valuable information which they afford to the medical man of to-day, but in any case there is not one that we would have done without. The most striking feature of these writings considered as a whole is the thoroughly sound and practical common-sense which permeates them, illumined not infrequently by flashes of real inspiration. Not one of the least of the charms of these various papers is the clear and simple explanations given of many common symptoms and physical signs. In many of them some special case or series of cases is used as the text upon which to hang a general account of some disease or rare condition, and the accounts of these cases are invariably given in such language as to bring vividly before us the symptoms and physical signs, while the way in which they are utilised show that Sir William Broadbent was not only an extraordinarily acute observer but also a master in diagnosis. In regard to treatment, the book teems with practical hints and it can be read with great profit as a stimulating and instructive exercise by all who appreciate the value of exact and careful clinical observation of cases.

The first paper given in this volume is the last completed paper published shortly before the death of the author on the Examination of the Heart. It consists of a critical examination of the significance and value of the individual symptoms and physical signs observed in the various forms of cardiac disease. This paper is of interest, since it summarises the general principles applied by Sir William Broadbent in the diagnosis of cardiac lesions, a subject which he made so peculiarly his own and did so much to advance by his personal investigations. A number of the other papers are also devoted to consideration of cardio-vascular disease—such, for example, as those on the Conduct of the Heart in the face of Difficulties, on Adherent Pericardium, on Angina Pectoris and Pseudo-angina, on the Clinical Significance and Therapeutical Indications of Variations in the Blood Pressure, and on Aneurysm of the Aorta, all of which abound in useful practical suggestions.

An interesting paper on Venesection, reprinted from Vol. I. of THE LANCET of 1883, is strikingly up to date in its *résumé* of the practical application of that useful therapeutic measure

and was an early contribution to its return to favour after the desuetude into which it had fallen as a reaction from its excessive use in earlier times. Some remarkable cases are instanced of its value in chronic renal disease and in convulsions due to high arterial tension without disease of the kidneys. Several papers deal with disease of the respiratory organs; among them we may mention those on Pneumonia; on Interlobar Empyema; on Some Points in the Clinical History of Effusion into the Pleural Cavity; and on a case of Hydatids of the Right Lung Simulating Pneumothorax. It is difficult to realise that the paper on pleural effusion was written so long ago as 1881. An interesting point which is emphasised by Sir William Broadbent is that in cases where the signs indicate incomplete collapse of the lung—i.e., where loud bronchial breathing is heard all over the affected side—paracentesis is usually not necessary, since there is often not a great quantity of fluid and the cases recover spontaneously. The case of hydatid of the lung simulating pneumothorax is reprinted from the second volume of THE LANCET of 1878 and is an interesting illustration of the lucid and critical manner in which Sir William Broadbent recorded his cases and applied the pathological data obtained at the necropsy to the explanation of the clinical phenomena observed during life.

Within the short compass of a review it is impossible to mention all the subjects included in this volume owing to the wide range which they cover but we may refer to a few more of them. An address on Dilatation of the Stomach contains a useful account of the treatment of that condition. A clinical lecture on Sleeplessness, delivered in 1900 and recorded in our columns, is an interesting study of some of the protean forms of that distressing condition and abounds in common-sense hints as to treatment.

A considerable section of the book is devoted to Sir William Broadbent's papers on neurological subjects and, as is most fitting, the first of these is the remarkable paper published in 1866 in which the theory, now known by the name of its distinguished author, was first propounded of the existence of commissural connexions between the nuclei governing the action of bilaterally associated muscles. This paper is one of the most striking in the whole book and should be read by all who are interested in the history of neurology as an example of clear reasoning and thoughtful suggestion. Several papers deal with the subject of Aphasia, another with that of Epilepsy. The latter was delivered in the form of a lecture and gives an interesting account of that condition and its treatment. The Lettsomian lectures for 1874 on Syphilitic Affections of the Nervous System bring the volume to a close.

We can cordially commend this book to our readers, not only for its historical interest but also for the really valuable information in which it abounds. Dr. Walter Broadbent is to be congratulated on the choice which he has made from his father's writings, and the book which he has produced will certainly become a medical classic.

A Manual of Natural Therapy. By THOMAS D. LUKE, M.D. R.U.I., F.R.C.S. Edin. With 30 plates and 125 illustrations. Bristol: John Wright and Sons, Limited. 1908. Pp. 303. Price 7*s.* 6*d.* net.

THIS volume is intended to give an account of the use of water, heat, light, massage, electricity, and diet in the treatment of disease. The author, in his preface, modestly states that in the preparation of the work no attempt has been made to give a complete or exhaustive account of any of the departments dealt with, but he has endeavoured to embody the chief points of interest and importance briefly and succinctly, in such a manner as to awaken interest and to lead to further study and consideration of the methods treated of on the part of the reader. Dr. Luke would have acted more wisely had he modified some of his expressions of opinion on the use of drugs. For instance, the following remarks cannot altogether be taken as exact statements of the present conditions existing in hospitals: "Going round a medical ward one cannot help being struck by the absence of long prescriptions, once so common, on the patient's bed-card. These are now seldom seen. There is the chart with respiration and pulse-rate, the temperature, blood-count, &c., and possibly away in the corner, in very small writing, 'Hæmatogen ℥i. t.i.d.,' or 'Nuclein gr.ii.,' or 'Thyroidectin gr.v.' On all the bed-cards the British Pharmacopœia takes a minor place." Then, again, an imaginary picture is drawn of what Dr. Luke would apparently wish his readers to believe takes place in most medical wards: "At one bed we see a man, with a pallid, puffy face, lying in a bed vapour bath; at another an electrician is galvanising a case of exophthalmic goitre from 'the main'; and as we leave the ward we notice a fair-haired Norseman enter, and we are told that he is the masseur, who pays a daily visit." Dr. Luke mentions the exceptions to the patients usually seen in the medical wards of a general hospital and seems to hint that such cases are much more common than is really the case.

Accepting "natural therapy" at its true worth we can give all praise to Dr. Luke's work as affording a good description of the various methods and appliances necessary for the numerous processes which may be carried out at the recognised spas or in private houses or institutions. The *rationale* of the use of mechanical means is explained in a scientific manner and the indications for the use of baths, heat, cold, massage, or electricity are fully and carefully considered. It is perhaps doubtful whether the proper and suitable application of hydrotherapy, thermotherapy, "massotherapy," and electricity is fully appreciated by the general mass of practitioners and a volume of this nature will be welcomed.

The book is of moderate size and the manner in which it is written renders it easy to read and to understand. The illustrations are numerous and good and add considerably to the value of the letterpress. Those of our readers who wish to increase their knowledge of mechanical therapeutics cannot do better than consult its pages.

Tuberculosis in Infancy and Childhood, its Pathology, Prevention, and Treatment. By Various Writers. Edited by T. N. KELYNACK, M.D. Vict., M.R.C.P. Lond., Physician to the Infants Hospital, Westminster; Physician to Mount Vernon Hospital for Consumption and Diseases of the Chest. London: Baillière, Tindall, and Cox. 1908. Pp. 376. Price 12*s.* 6*d.*

THE *British Journal of Tuberculosis* for July, 1907, formed a special number devoted to the consideration of Tuberculosis in Infancy and Childhood, and contained signed articles by well-known authorities dealing with various aspects of the question. This volume is an expansion of the series of articles contained in that journal. The list of contributors is a long one, containing 38 names of English, American, and continental observers.

In his introductory remarks Dr. Kelynack draws attention to some of the problems of tuberculosis which are still under discussion. He rightly expresses surprise that in the conduct of the antituberculosis campaign measures for the systematic study, organised prophylaxis, and adequate treatment of tuberculosis in early life should hitherto have received but little attention. This has been more particularly the case in this country than in some continental countries, especially France, where sanatoriums for "consumptive children" are numerous. A work of the kind now before us is therefore welcome, as it treats of tuberculosis

in children from every point of view, prophylaxis and treatment naturally occupying the most important positions.

As there are so many contributions to this volume it is only possible for us to allude to a few, though most of the articles are interesting and instructive. Dr. J. S. Fowler (Edinburgh) writes on the Milk Problem and Tuberculosis in Infancy and Childhood. He is of opinion that tuberculous milk "is responsible for a quarter, more or less," of the tuberculosis of childhood. This estimate is probably too low but he very properly urges that stringent measures are demanded for the proper prevention of infection. He considers these measures under three headings: (1) legislative; (2) commercial; and (3) domestic. He maintains that the defect of existing legislation is that it is so largely optional, and we agree with him when he says that its adoption ought to be universal and compulsory. He recommends that all milk given to children should be sterilised by boiling and criticises the objections which have been raised against this procedure. He insists that but few children suffer in any way from taking sterilised milk and that the advantages far outweigh the disadvantages.

Eight chapters are occupied in the consideration of tuberculosis among children in different countries. Particularly interesting are the remarks by Professor R. Calmette (Lille) on the methods which are adopted in France for the prevention and cure of tuberculosis in children. There are in that country two classes of sanatoriums which have the above aims: the one deals with cases of pulmonary tuberculosis and the other is concerned with tuberculosis of bones, joints, and glands. The first class consists commonly of woodland sanatoriums; the other class is represented by seaside sanatoriums. Of the latter kind 24 are scattered along the English Channel, the Atlantic seaboard, and the Mediterranean coast, these stations having amongst them 3923 beds. The seaside treatment is pursued with the best results.

Amongst other articles in this book may be mentioned the following: Bovine Tuberculosis in Children, by Dr. Nathan Raw; Intrathoracic Tuberculosis in Infants and Children, by Dr. R. A. Young; Alpine Climates for Tuberculous and Tuberculously Disposed Children, by Dr. W. R. Huggard; and the Hygiene of the Nursery in Relation to Tuberculosis, by Mrs. M. A. D. Scharlieb, M.D., M.S.

Dr. Kelynack may be congratulated on having edited a work containing a large amount of information which can only be found scattered through many books, journals, or proceedings of scientific societies. The volume is of moderate size and the various contributions are essentially of a practical nature, mere theory having been eliminated.

LIBRARY TABLE.

The Lament of the Sweated. By JAMES SAMUELSON, of the Middle Temple, Barrister-at-Law. London: P. S. King and Son. 1908. Pp. 68. Price 1*s.* net.—In these pages Mr. Samuelson discusses the report of the 1907 Select Committee on Home Work. We deal with the same report in a leading article and need say little more except that those who are concerned at a terrible social evil but have not opportunity to gain knowledge of it at first hand will find in this little book a straightforward and sympathetic statement of the chief questions involved, together with a summary of the Committee's recommendations and of the measures which other countries have adopted to prevent the sweating of home workers. Mr. Samuelson's chief contribution is his advocacy of sanitary communal workrooms and crèches, to be erected by municipal or private benevolence. His book deserves a wide circle of readers but should it run into a second edition we hope that he will see his way to delete or to modify greatly his first chapter on "Dives." The fashion-page description of elaborate ball-dresses with which he seeks to "pile on the agony" of the contrast between the idle rich and the starving poor may well lose him the attention at the outset of many who take up the book. We must add that the author of its prefatory verses, who has tried to follow in the footsteps of Tom Hood, has stumbled into an unfortunate bathos as the reward of his rashness.

Legal Responsibility of the Drunkard. By H. NORMAN BARNETT, F.R.C.S. Edin., Surgeon, Cripples' Home, Belfast. With an Introduction by Sir ANDREW REED, K.C.B., C.V.O., Barrister-at-Law, late Inspector-General of Royal Irish Constabulary. London: Baillière, Tindall, and Cox. 1908. Pp. 64. Price 2*s.* 6*d.* net.—In this little treatise Mr. Barnett maintains that the civil and criminal actions of the chronic drunkard are not sufficiently recognised in courts of law as those of persons not of sound mind. He observes in his preface that "there is a growing feeling in legal circles that the drunkard should not be treated in quite the same way as another criminal. Recent medical research has clearly proved that this feeling is well founded." The pages which follow, however, contain a summary, not without interest, of the medical aspects of alcoholism but no very precise suggestion as to how these are to be established with a view to diminishing the criminal liability of the drunkard and to depriving him of his civil rights. We agree with the proposition that the medical rather than the legal profession must diagnose between the curable and incurable criminal; but we should also observe, with reference to the "legal circles" referred to above, that only a very small section of the legal profession, consisting of by no means its most influential members, is interested to any great extent in crime and criminals, and that in civil as well as criminal matters the jury which weighs the conflicting evidence of medical and other witnesses when mental soundness or unsoundness is the question at issue, is composed of persons without medical or legal training. Mr. Barnett in his concluding words suggests, unconsciously perhaps, at least one practical difficulty for which he hardly seems to propose a remedy. After explaining signs by which the chronic drunkard may be recognised he tells us that if we have one or more of these present with corroboratory evidence of a drinking habit, "*we* may conclude *whatever evidence may be produced to the contrary* [the italics are ours] that we are dealing with a drunkard suffering from mental degeneration and not fully responsible for his actions nor capable of using his full rights as a citizen." It is the "evidence to the contrary" and the fact that it is weighed not by experts but by a judge and jury which render unsatisfactory the status of persons mentally degenerate from other causes as well as from chronic alcoholism.

Who's Who, 1909. Pp. 2112. Price 10*s.* net. *Who's Who Year Book, 1909.* Pp. 154. Price 1*s.* net. *The Writers' and Artists' Year Book, 1909.* Pp. 118. Price 1*s.* net. *The Englishwoman's Year Book, 1909.* Pp. 372. Price 2*s.* 6*d.* net. London: Adam and Charles Black.—These four useful year books have made their appearance in good time for the coming year. The first and most important of them—namely, "Who's Who," has increased in size from 2040 to 2112 pages. The book's scope is too well known to need description and it would be as hopeless a task to review it as it would to review the "Peerage," but we may add that it would be a much more interesting task. For although a certain number of quite unimportant persons are bound to find their way by active or passive pushing into so comprehensive a manual, taken as a whole it is a really admirable catalogue of those who hold authority in every walk of life by right of brain-power and executive ability, as well as of those who were born in high

places. People who take pleasure in reading of the recreations of public men will find that they still range from mountaineering and music to serendipity (which means, we believe, buying and selling curios). We read that one Roman spirit finds its ease in "public duties"—a recreation which we trust will be noted widely. We will say, as we have said before, that "Who's Who" is well-nigh indispensable in a newspaper office, for it gives that accurate information about the careers of all sorts of public people to which all journalists require convenient access. The few biographies of eminent foreign men are very welcome, although their number obviously must be limited. "Who's Who Year Book" contains *inter alia* lists of public office holders, including the staffs of the London general hospitals, and a condensed "peerage." "The Englishwoman's Year Book" claims, with good reason, that "no woman who takes any part in public or social life can afford to be without it, especially in view of the great Renaissance of women." It includes complete and practical accounts of the trades and professions open to women and the means of entering them. Lists of women's clubs, girls' schools, public offices held by women, and much other matter are included. The "General Prospects" section heading the chapter on "Medicine, Pharmacy, and Dentistry" is an abstract of Dr. Mary Thorne's address on "Medical Women and their Prospects" at the Conference of Women-Workers held at Westminster this year. "The Writers' and Artists' Year Book" contains lists with details of English journals and magazines, literary and art publishers, printers, and agents, and other matter including a guide to authors on the correction of proofs.

Diaries for 1909.—We have received Messrs. Walker and Co.'s annual batch of pocket diaries for 1909, with two larger scribbling diaries for desk use. Most of the pocket diaries are printed so as to allow of a week's entries at each opening, but some allot a whole page to each day. The former, which are more generally convenient, are made in several sizes and are bound in cloth, leather, and skin of various kinds. Some of the covers are fitted inside with pockets for stamps and cards. The diaries include pages ruled for a monthly cash account on a system which, as we can testify from experience, is clearly and simply arranged. Diaries Nos. 4 and 7, bound in pigskin or Russian leather, strike us as being particularly attractive. Small waistcoat pocket diaries are included amongst the batch. Any size of diary issued by Messrs. Walker can be obtained in any of their bindings. An insurance coupon against various accidents is a feature common to these publications and to the handy "Letts's Diaries" issued by Messrs. Cassell and Co., who have sent us samples and ask us to state that they are the sole publishers of these little books. One of them is a cloth bound pocket medical diary that is really suited for the pocket, being much thinner and neater than most of such publications. A bulkier form of it is issued in a leather binding. Messrs. John Wright and Sons (Bristol) have also sent us their "Physicians' and Surgeons' and Consultants' Visiting List (Form A) for 1909" (sixteenth edition). This book is well known to many of our readers. By a system of interposing half leaves between the pages it enables an entry for a visit on every day in the month to be made in a different square against a patient's name, the record for the whole month being shown at one opening. We recommend this diary as practical and useful.

JOURNALS AND MAGAZINES.

Proceedings of the Royal Society of Medicine. Vol. II., No. 1, November. London: Longmans, Green, and Co.—This volume is opened by the report of the committee appointed by the council of the Royal Society of Medicine upon the resuscitation of the apparently drowned which we reviewed in an annotation on Dec. 5th. Following this report the proceedings of the Section for the Study of Disease in Children make their first appearance, the contributions including clinical reports of cases by Dr. F. W. Higgs, Dr. J. P. Parkinson, Dr. C. W. Chapman, Dr. E. Cautley, Mr. D. C. L. Fitzwilliams, and Dr. G. Carpenter, president of the section, who describes two cases of microcephaly. Dr. F. J. Poynton, with Dr. W. Jeffrey, reports two cases of post-basic meningitis with recovery after injection of Ruppel's serum and one fatal case treated similarly. Dr. Poynton also describes with Dr. R. H. Miller specimens from a case of cleido-cranial dysostosis. In the Clinical Section cases are reported by Mr. W. S. Handley, Dr. A. Stanley Green, Mr. R. G. Hann, with Dr. H. Lambert Lack, Dr. Poynton, Mr. Percy Flemming, and Mr. Raymond Johnson. The Dermatological Section is occupied by cases by Dr. H. G. Adamson, Mr. T. J. P. Hartigan, Mr. W. Stuart-Low, Dr. E. Graham Little, Sir Malcolm Morris with Dr. S. E. Dore, Mr. G. Pernet, and Dr. J. H. Sequeira. The Electro-Therapeutical Section prints the report by the president, Mr. W. D. Butcher, on the Fourth International Congress of Medical Electrology and Radiology at Amsterdam. The Epidemiological Section is occupied with an important paper on Season and Disease, by Dr O. H. Peters, with the discussion which it evoked. The Medical Section publishes Captain R. McCarrison's careful observations on Endemic Cretinism in the Chitral and Gilgit Valleys, which our readers will remember. The Neurological Section opens with a study of Two Anomalous Cases of Syringomyelia, by Dr. Gordon M. Holmes and Dr. R. F. Kennedy. Other cases by Dr. F. E. Batten illustrate the sequel to a Cerebellar Atrophy and Diffuse Sarcomatosis of the Brain and Spinal Cord. Dr. S. A. K. Wilson describes the pathological condition in two cases of Tabetic Amyotrophy. The Obstetrical and Gynæcological Section contains a paper (including some remarkable illustrations) on Dystocia due to Distension of the Urinary Bladder of the Fœtus, with remarks on Renal Secretion in Utero, by Dr. J. E. Spicer. Other case records are by Mr. Alban H. G. Doran, Dr. Cuthbert Lockyer, Dr. A. H. N. Lewers, and Mrs. Scharlieb, M.D. The Odontological Section reports a Mechanical Device for Amalgamating Alloys, communicated by Mr. W. F. Mellersh and an abstract of Mr. W. Wright's paper on the Teeth of Early Man. In the Pathological Section Mr. P. N. Panton describes an Investigation into some Aspects of the Action of Arsenic on the Blood (especially as regards Phagocytosis), the Bone Marrow, and Certain Viscera. Mr. R. L. Knaggs and Dr. O. C. Grüner report a rare case of Bone Disease, and Dr. J. Burton Cleland contribute a note on Melanotic Deposits in Cattle and Sheep. The Surgical Section contains one long paper on Traumatic Rupture of the Intestine by Mr. James Berry and Mr. P. L. Giuseppi. It is compiled with great care and contains a valuable analysis of 132 cases that have occurred in ten London hospitals from 1893 to 1907. The Therapeutical and Pharmacological Section publishes Dr. Nestor Tirard's address on the Scope and Object of the British Pharmacopœia.

The Hospital Gazettes.—The chief contributions to the November number of the *Guy's Hospital Gazette* have been further instalments of "Notes by a Roving Guy's Man," dealing with continental clinics in a breezy but informative manner. *The London Hospital Gazette* (December) again shows its interest in natural history by giving precedence to an article by "P. H. B." on the Sea Birds' Home—to wit, the Island of Handa—and by an account of the vegetable colonisation of coral atolls from "F. W. J." *St. Bartholomew's Hospital Journal* (December) contains a continuation

of Dr. A. R. Neligan's Notes on Persia which are written with the authority of a legation physician, and a paper on Big Game Shooting by Dr. Percy Rendall who proves himself no less a *shikhari* than a naturalist. Mr. Herbert W. Page's long experience of railway litigation makes his contribution to the *St. Mary's Hospital Gazette* (November) a valuable one, dealing as it does with Functional Disease *versus* Organic Disease Following Accidents. The leading contribution to the *St. Thomas's Hospital Gazette* (November) is an interesting paper by Dr. T. D. Acland on Egypt and the Soudan. The information which he gives concerning the medical education and clinical work done under the British occupation of Egypt affords an ample justification for that measure.

Reports and Analytical Records
FROM
THE LANCET LABORATORY.

(1) TABLETS FOR THE ESTIMATION OF SUGAR IN URINE; AND (2) TABLETS FOR THE ESTIMATION OF ALBUMIN.

(E. MERCK, DARMSTADT; LONDON OFFICE, 16, JEWRY-STREET, E.C.)

1. THE estimation of sugar in urine is made extremely simple and nevertheless accurate by means of these reagent tablets. Tablet A contains the copper salt and tablet B the necessary amount of alkali. The reducing value of two tablets dissolved in water is equal to 0·01 gramme of glucose, so that should the urine to be tested contain 1 per cent. of sugar 1 cubic centimetre suffices to reduce completely the copper contained in tablet A. The analytical method of procedure is simple. One copper and one alkali tablet are dissolved in 2·5 cubic centimetres of water and to this, after heating to boiling, 2·0 cubic centimetres of urine are added and the mixture is boiled. It is then filtered through a good filter and should the filtrate be yellow or brown the urine contains more than 0·5 per cent. of sugar. If the filtrate should be green or blue then less than this amount is indicated. The test is repeated, less or more urine being used until the exact quantity is found to reduce the copper completely in the tablet. In the case of a urine containing a large percentage of sugar it is desirable to dilute the urine to a definite volume before proceeding to the analysis. We found the method to be exact when operating on standard solutions of glucose containing 0·5 per cent. and 0·2 per cent. respectively of sugar. 2. The tablets for the detection of albumin in urine also answered satisfactorily. Of these we received three kinds—namely, Esbach's reagent, Riegler's reagent (beta-naphthalene sulphonic acid), and a test called A and B, in which two different tablets are employed containing citric acid and potassium ferrocyanide respectively. The advantage of Riegler's reagent is that while it precipitates albumin, albumose, and peptone, the last two disappear on boiling. The Esbach reagent can be used for the determination of albumin by measuring the volume of the precipitate in an Esmarch tube.

TOOTH SOAPS AND POWDER.

(EDWARD COOK AND CO., LIMITED, SOAP WORKS, BOW, LONDON, E.)

These preparations present certain novelties and are designed to meet the cult of the aseptic mouth. "Biscuit," for instance, is a pleasantly scented soap tablet of chocolate colour which is most useful for the cleansing and washing of dental plates. According to our examination, it contains a fine impalpable powder which serves as a burnisher, besides which are present an antiseptic and, of course, a detergent. It is very agreeable to use and answers its purpose satisfactorily. "Hygeso," according to our analysis, contains an antacid in addition to the soap which is the basis and a deodorant. Like the last preparation it is very pleasant to use and leaves a sense of cleanly condition in the mouth. Lastly, "Royalist" is a powder containing a well-known antiseptic absorbed in fine chalk. It is free from sharp gritty particles.

SCOTCH WHISKY.

(JOHN SOMERVILLE AND CO., LIMITED, CRAIGMILLAR, EDINBURGH.)

This whisky is guaranteed to be ten years old and we can well believe the statement, judging from the flavour of the spirit which is mild and mellow. It is, in fact, very soft and smooth to the palate, the absence of raw and acrid constituents thus being indicated. Furthermore, the results of the analysis implied the genuineness of the spirit in regard to its origin, that is to say, from malt. The results of analyses were as follows: alcohol, by volume 48·75 per cent.; extractives, 0·12 per cent.; and mineral matter, 0·02 per cent. Amongst the secondary products were ethers 77 parts and furfural 3 parts per 100,000 parts of alcohol present. In view of this analysis we believe this whisky to be genuinely described, and it is therefore suitable, when permitted, for dietetic requirements.

LEGUMINE BISCUITS (VOEBT).

(WILCOX, JOZEAU, AND CO., 49, HAYMARKET, LONDON, S.W.)

One important novelty in regard to these biscuits is that they are made with legumine, or vegetable albumin, and another interesting feature about them is that the starch has been partially converted into dextrin by means of diastase. The biscuits, therefore, should be easily digestible. Our analysis gave the following results: moisture, 9·20 per cent.; mineral matter, 11·70 per cent.; protein, 13·59 per cent.; and carbohydrate, 65·51 per cent. The biscuits seem well adapted for weak digestions, as in cases of persons suffering from dyspepsia or other gastric troubles. Further, they contain a very decided proportion of phosphorus in an organic form—that is to say, as glycero-phosphate. They have also been suggested for use in diabetes but owing to the carbohydrates present they should not be used for this purpose except under the supervision of a medical man in order that a watch may be kept over the tolerance of the patient in regard to a diet containing substances easily converted into sugar.

MAGI MINERAL WATER.

(CALEDONIA SPRINGS CO., LIMITED, 133, JERMYN-STREET, ST. JAMES'S, LONDON, S.W.)

This water, bottled at the springs at Caledonia, Ontario, Canada, shows an interesting composition. The springs are situated midway between Montreal and Ottawa and are under the control and supervision of the Canadian and Pacific Railway Company. The water is somewhat highly mineralised, the chief salt present being sodium chloride, which, according to our analysis, amounts to 479·000 grains per gallon out of a total amount of salts of 513·000 grains per gallon. The water is also alkaline, due to the presence of carbonates of the alkalies and alkaline earths. It further contains a notable quantity of the bromides and iodides of sodium. The water clearly belongs to the class known as alkaline, carbonated, and saline, which have been used in the treatment of gastric and intestinal catarrh, rheumatism, and gout. According to the analysis of Professor A. S. Ew of McGill University the water is decidedly radio-active. The water is somewhat saline to the taste but is pleasantly sparkling.

VI-TONICA.

(SLACK AND COX, HYDE-ROAD, MANCHESTER.)

It is quite justifiable to call Vi-Tonica a temperance beverage since, according to our analysis, there is no appreciable amount of alcohol present. The extractives amounted to 8·72 per cent. which consist chiefly of sugar. Quinine and phosphates were readily found, the employment

of these being, no doubt, the foundation for its claim to tonic properties. We found present also as a provision against fermentation some salicylic acid but the amount was small and considerably less than that recommended to be permitted by the Departmental Committee on Preservatives. The flavour and the general characters of the beverage will no doubt appeal successfully to many persons but on the first point we have not formed a favourable opinion.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on Dec. 10th, Mr. HENRY MORRIS, the President, being in the chair.

A report was read from the Board of Examiners in Anatomy and Physiology for the Fellowship, stating that at the recent examination 97 candidates presented themselves, of whom 37 were approved and 60 rejected.

In accordance with a report from the Court of Examiners it was resolved to issue Diplomas of Fellowship to 28 successful candidates.

It was resolved to issue diplomas in Dental Surgery to 33 successful candidates.

A report was received from the committee on the annual report of the Council. In accordance with the recommendations of that committee, it was resolved to adopt the following replies to the resolutions carried at the annual meeting. The first resolution was :—

That this meeting thanks the Council for having for the first time in its history taken a poll of the Members of the College, but regrets that the Council found itself unable to abide by the result. This meeting also trusts that the Council will shortly take a further poll of the Fellows and Members on the question of the direct representation of Members, as requested by the last annual meeting.

The Council's reply was :—

The Council regret that their views and those of the majority of the Members who replied to the circular addressed to them regarding the admission of women to examination for the diplomas of the College are not in accord. With regard to the suggestion that the Council should take a further poll of the Fellows and Members on the question of the direct representation of Members, the Council adhere to their decision as set forth in the last annual report.

The second resolution was :—

That this meeting is of opinion that women when admitted to the diplomas of the College should have equal rights with men.

The reply was :—

The Council have from the first signified their intention of proceeding under the Medical Act of 1876, whereby no woman admitted a Fellow or Member would be entitled to take any part in the government, management, or proceedings of the College. The Council see no reason for departing from the course which they decided upon after due and careful consideration.

The third resolution was :—

That the President and Council of the Royal College of Surgeons be respectfully asked to use their moral influence to obtain some more sufficient title for those who have passed the examinations for the Conjoint Diploma, remembering the importance attached to degrees to the detriment of holders of the said diploma granted by this ancient corporation in conjunction with the Royal College of Physicians of London.

The Council's reply was :—

The Council once more express the opinion that it is impracticable to obtain a legal right to the title of Doctor of Medicine for any person who does not hold the degree of M.D. The Council would refer those who supported the resolution to the last annual report for information as to the steps which they have been, and are, taking with a view to providing medical students of London with greater facilities for obtaining degrees in medicine.

Mr. W. G. Spencer was elected a member of the Court of Examiners.

Mr. Edmund Owen was appointed a member of the Court of the University of Liverpool for three years.

A report was received from the delegates of the Royal Colleges of Physicians and Surgeons appointed to consider a scheme for a system of conjoint examinations with the University of London.

A letter was read from the President reporting the proceedings of the General Medical Council at its recent session, and the best thanks of the Council were given to the President for his services as the representative of the College on the General Medical Council.

A letter was read from the Registrar of the General Medical Council inquiring by direction of that Council how far the College had given effect to the recommendation of that Council of June, 1907, "by requiring students to produce evidence of having received practical instruction in the administration of anæsthetics." It was resolved to send the following reply :—

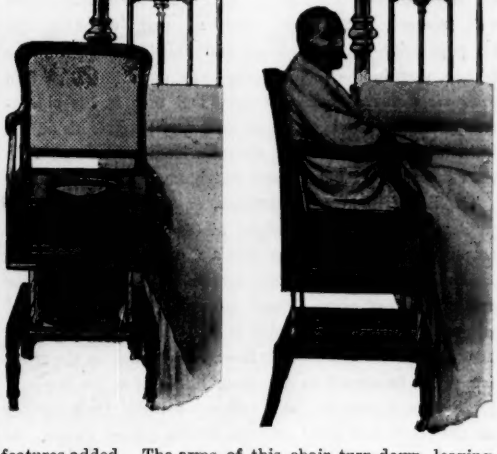
That the General Medical Council be informed that the desirability of making practical instruction in the administration of anæsthetics a compulsory part of the medical curriculum was recognised by the Council of the Royal College of Surgeons of England in 1901, and that in December of that year, in conjunction with the Royal College of Physicians of London, a regulation was adopted requiring every candidate before admission to the Final Examination to produce a certificate of having received at a recognised medical school and hospital instruction in the administration of anæsthetics to the satisfaction of his teachers, and that, moreover, questions on the subject are from time to time put to candidates by the examiners of the College. That the Council trust that the General Medical Council will be successful in the present endeavour to induce other examining bodies to adopt a regulation which has long been in force at the English Royal Colleges of Physicians and Surgeons.

The PRESIDENT reported the delivery of the Bradshaw lecture by Sir W. Watson Cheyne, Bart., on Dec. 4th, the subject of the lecture being the Treatment of Wounds. The best thanks of the Council were given to Sir W. Watson Cheyne for his lecture and he was requested to publish it.

New Inventions.

A NEW RISING SEAT COMMODE.

IN attending a case recently in which the patient was so averse to the use of the bed pan that aperient medicines had to be constantly given, it occurred to me that if the commode in common use could be made adjustable to the height of *any* bed the patient could with very little assistance shift himself on and off it with comparative ease, the difficulty of *lifting* a heavy patient back to bed from the ordinary commode being thus overcome. This suggestion of mine has been skilfully carried out by Messrs. J. and A. Carter, of 26, New Cavendish-street, W., and many other useful additional



features added. The arms of this chair turn down, leaving the seat flush with the height of any bed, and a firm strong footboard is fitted, so that the patient can slide off either side of the bed on to the seat and occupy a natural position, or can sit on the commode with the legs remaining in bed. A false caned seat slides over the orifice when the commode is required for use as an ordinary chair. The mechanism of the rising seat is easily operated by nurse or attendant, by whom this commode will be found, I think, of considerable use.

H. W. ARMSTEAD, M.D. Lond., F.R.C.S. Eng.

Queensborough-terrace, Hyde Park, W.

THE LANCET.

LONDON: SATURDAY, DECEMBER 19, 1908.

Medicine and Imperial Expansion.

THE ominous unrest in our great Indian dependency gives a relevance all its own to the remark of one of the most sagacious of Viceroys, Lord LAWRENCE, who, on quitting his post, made the public declaration that "our Eastern Empire owes more to medico-missionaries like Dr. HUSBAND than to its regular officials." The distinguished physician whose career elicited this remark died on Nov. 21st at his post after 38 years of labour as unremitting as it was well-directed. Bearing an honoured name in the practical defence of Jennerian vaccination Dr. HUSBAND was commissioned by the United Presbyterian Church of Scotland to carry on the medical department of its Christianising work in 1870, and, chiefly in Ajmir, picturesquely situated in Central Rajputana, the highest tableland of Hindostan proper, he so exerted himself in behalf of the corporeal no less than the spiritual wants of the natives that he shared with his colleagues, Dr. J. SHEPHERD of Udaipur and Rev. J. SOMMERVILLE of Jodhpur, the title of "King" in his province. Having come to know the people "in their habit as they lived," their joys and sorrows, their predilections and their aspirations, he found a way to their minds and souls denied to all but the most sympathetically suasive of missionaries—conciliating not only their admiration and respect but their affection and devotion, till his popularity with all classes and creeds gained him the highest seat in the municipality—nay, even the *entrée* into their *vie intime*. Such confidence had they in his philanthropy and practical good sense that they courted his advice in their domestic affairs, in their business concerns, and in the education of their sons and daughters.

The late QUEEN and EMPRESS, on the occasion of her jubilee in 1897, acknowledged his services, civic as well as professional, by making him a Companion of the Most Eminent Order of the Indian Empire. His efforts for the advancement of every Hindoo interest knew no limits, and not only in the hospital and in the dispensary but in the hostel and the orphanage, in the workshop and in the printing office, he strove to extend and to enrich the army of breadwinners, content—nay, zealous—to fulfil their destiny as citizens and as loyal subjects of the British Crown. In exceptional visitations—those of famine, for example—he is credited with having saved thousands of lives. *O si sic omnes.* Such men are the true pioneers and consolidators of empire, justifying the noble eulogy pronounced on them by the Bishop of BIRMINGHAM at Edgbaston on the day of Dr. HUSBAND'S death, and giving cogency to his statement that "the India Office was profoundly convinced that unless we could get a basis for human brotherhood and common sympathy between Englishmen and the people of India, neither our Empire nor our civilisation could last."

The Bishop of Zanzibar, Dr. J. E. HINE, who is both an M.D. of London and a D.D. of the University of Oxford, had indeed anticipated his Right Reverend brother of Birmingham in the address with which he opened the Medical Missions section of the Pan-Anglican Congress last summer, emphasising as he did the primary importance of the care of the injured and the ailing in their private homes and in the hospital, and showing how the "loving care of the body" must always precede the instruction, secular or religious, of the evangelist. Even the nurse, he went on to say, "reached quarters which would otherwise be inaccessible." The practical corollary to be deduced from this and similar testimony is, as THE LANCET has time and again insisted upon, the promotion of medical study and research in our outlying "spheres of influence" by the institution of chairs of medicine, tropical and sub-tropical, such as have been endowed under the best auspices in more than one British school. The competition of rival colonising powers comes in as an incentive to such a movement—the French, for example, as was pointed out at the Pan-Anglican Congress, having done splendid work in the island of Madagascar, thanks to the provision which they have made for the medical training of their missionaries. The time will come when, instead of the medico-missionary work being left to one and the same individual, the two qualifications, that of physician and surgeon on the one hand and evangelist on the other, will be kept separate, to the greater efficiency of either functionary in his special sphere. Of this happy division of labour—unity in duality—the Bishop of ZANZIBAR gave most interesting illustration, still further driving home the conclusion that Great Britain's control of her dependencies and colonies will be effective and lasting in the degree in which she secures to the natives that care of the body, in health and disease, which must precede all subsequent effort towards their reclamation to civilised life and brotherly citizenship.

Sweated Industries and Sanitation.

DURING the summer session a Select Committee of Parliamentary representatives of all shades of political opinion sat at Westminster to take evidence and to report upon the many issues, economic, hygienic, and humanitarian, which affect those engaged in industrial work in their own homes. The committee had before it Mr. RAMSAY MACDONALD'S Home Work Regulation Bill and was asked to consider Mr. ARTHUR HENDERSON'S Sweated Industries Bill which it has reported without amendment. The minutes of evidence issued with the committee's report on the general order of reference make gloomy reading when we consider that 65 of the most progressive years in the country's history have elapsed since the conscience of the nation was awakened to the degrading industrial slavery existing in its wealthiest cities by the publication of the "Song of the Shirt." Since that year legislation has done a great deal to promote the physical welfare of the working classes, especially of those who gain their living in workshops and factories and by dangerous trades, but the lot of the home worker—the most defenceless

of all bread-winners—has undergone no improvement beyond those incidental to the very incomplete reforms accomplished in the housing of the people. The lethargy of successive governments was not due to lack of protest, for during the last half of the nineteenth century the case of the sweated was pleaded from many platforms and in not a few newspapers, amongst which THE LANCET took its stand. In later decades the realistic school of journalism, and the establishment of University and public school settlements in the East-end of London, perhaps, too, the slumming expeditions which became a fashionable hobby in the early "eighties," brought the actual conditions of home labour still more vividly before the public. In 1890 Lord DUNRAVEN'S Committee was appointed which, after hearing evidence from 291 witnesses drawn from many different trades and localities, recorded the opinion that the evils of sweating "can hardly be exaggerated." But although still more indignation was expressed at the "grinding of the faces of the poor" no direct legislation resulted and attention was again flagging in the matter when the *Daily News* in 1906 organised a vigorous propaganda by means of an "Exhibition of Sweated Industries." This idea was borrowed from Berlin, where similar exhibitions had been held with success in 1904 and 1906, the first of which had been followed by a smaller exhibition organised by the Rev. J. E. WATTS-DITCHFIELD at Bethnal Green. It was the attention aroused by his venture that encouraged the *Daily News* to embark on its more ambitious enterprise two years later. We need say little about this exhibition, as doubtless many of our readers visited it and others will remember that we published an account of it which we received from our Sanitary Commissioner, but we may recall that its main purpose was to show to the public typical home workers in different sweated industries plying their trades under conditions representing as closely as possible their actual home surroundings. A carefully compiled handbook gave full information concerning the wages paid for the work which was exhibited and the number of hours of labour in the week which its production entailed. This exhibition afforded so impressive an object lesson that to it may be given a large share of credit in the appointment by the Government in 1907 of a Select Committee "to consider and report upon the conditions of labour in trades in which home work is prevalent, and the proposals including those for the establishment of wages boards and the licensing of work places which have been made for the remedy of existing abuses." This committee took a large body of expert evidence and reported it without comment, recommending the appointment of another committee in the next session of Parliament. The recommendation was carried out and the report of the 1908 committee is contained in the Blue-book which was issued during the summer recess and with which we are concerned at present.

The bulk of the Blue-book is made up of the minutes of evidence which was given by manufacturers, home workers at different trades, factory inspectors, social workers amongst the poor, and others having special knowledge of the question. Medicine had no direct representative, although the 1907 committee, which had almost the same constitution as that of 1908, heard the evidence of Dr. R. DUDFIELD, medical officer of health of Paddington, on the sanitary issues involved and many of the witnesses answered questions on cognate points. On the whole, however, the sanitary side of the problem was unduly subordinated to the industrial. If a national problem ever had to be faced in which these two factors were inextricably blended it is surely that presented by the home workers, for their physical and economic welfare are strictly interdependent. The somewhat one-sided view of the committee is shown in these lines from its report which prefaces the evidence: "It is doubtful whether there is any more important condition of individual and general well-being than the possibility of obtaining an income sufficient to enable those who earn it to secure at any rate the necessities of life." This is a sound enough maxim, for it is quite obvious that any legislation insuring a regular and proper "living wage" to a large body of workers must react favourably upon the health of the community. Better nutrition and better clothes for mothers and children will result in increased resistance to diseases amongst a class which at present forms a focus of varied infection. But the matter does not end with increasing by law the earnings of home-workers. The responsibility of the State is no less concerned in safeguarding their "individual and general well-being" by seeing to the healthfulness of their environment. Sanitary conditions of life should be the first condition of labour in the home no less than in the factory and should not be dependent upon the fruits of the labour. But this brings the argument round again to its economic side, and the problem of ways and means is hardly suited for discussion by a medical journal which may, however, properly record the chief of the committee's conclusions, some of which have important bearings upon the public health. In the first place it has proved by full evidence a matter of common knowledge "that the earnings of a large number of people—mainly women who work in their homes—are so small as alone to be insufficient to sustain life in the most meagre manner, even when they toil for extremely long hours," and it is also satisfied that sweating exists at present in such a degree as to call urgently for the interference of Parliament, a verdict that can be disputed by no one who reads the evidence on which it is based. We need only quote that given by a home worker, "Miss G."—admittedly the worst case examined by the committee—who stated that she worked from 6 in the morning till 12 at night at shirt finishing to earn about 5*s.* 6*d.* a week, and summed up her physical condition in the remark, "I can get a little bit of bread, and that is all we do get." We may add that her *bona fides* and that of all the industrial witnesses were established on good authority. Turning to the committee's report, we find that after giving a classification of home workers it proceeds to consider at some length the reasons of their scanty earnings. This section endorses the opinion expressed by the Labour Commission in 1894. "In the absence of organisation and in the face of the unlimited competition for the cheaper and less skilled kind of sempstress and similar work, there seems to be little to prevent wages from sinking to the point at which, in the words of one witness, 'it is easier to starve without

the work.'" A very important suggestion made by the committee is that the imposition by law of obligations upon owners of factories and workshops tends to encourage employers to resort to home work in order to avoid these obligations and the visits of inspectors. The committee's investigation of the existing law with regard to home work retells an old story, that local authorities do not make sufficient use of the imperfect sanitary powers which they possess already. These powers fall under the general public health law concerning dwellings and certain special provisions of the Factory and Workshop Act of 1901, the chief of which prohibits any person to give out work to be done in premises which are injurious to the health of the persons employed therein. Persons giving out work are obliged to supply twice a year to the local authority a list of the outworkers whom they employ. These lists are usually incomplete and incorrect. Other Acts, such as the Truck Act of 1896, made for the protection of workers' wages, are often frustrated in their application to home workers and the committee is satisfied that the existing law has failed to produce any amelioration in their condition and that legislation of a far-reaching character is required.

The report then summarises some of the laws existing in other countries for the protection of home workers and proceeds to make its recommendations which we must record with little comment. These include the following suggestions:—

(2.) That legislation should at first be tentative and experimental, and be limited in its scope to home workers engaged in the tailoring, shirtmaking, underclothing, and baby linen trades, and in the finishing processes of machine-made lace. The Home Secretary should be empowered after inquiry made, to establish Wages Boards for any other trades.

(3.) That Wages Boards representing both workers and employers should be established in selected trades to fix minimum time and piece rates of payment for home workers in those trades.

(4.) That it should be an offence to pay or offer lower rates of payment to home workers in those trades than the minimum rates which had been fixed for that district by the Wages Board.

(6.) That all home workers who are employed by other persons in producing or preparing articles for sale should be required to register their name, address, and class of work at, and receive a certificate of such registration from, the offices of the local authority, and that the keeping of accurate outworkers' lists by employers should be strictly enforced.

(7.) That it should be an offence for any person to employ any home worker to produce or prepare any articles for sale by another person unless the worker produce a certificate of registration.

(8.) That the provisions of Section 9 of the Public Health Act, 1875, with regard to factories and workshops which are not kept clean or are ill-ventilated or overcrowded should be extended to rooms in which home work is done, and power should be given to sanitary and factory inspectors to inspect them and secure the enforcement of the law.

(9.) That the full protection of the Truck Act should be secured to home workers.

Recommendation (6) was apparently the outcome of Dr. DUDFIELD'S evidence given in 1907, and together with (7) and (8) it will probably receive the support of many medical officers of health. It will be seen that no suggestion is made of abolishing home work by establishing communal workrooms and crèches, which will occur to many as a possible and radical method of reform and which is advocated in Mr. J. SAMUELSON'S little book "The Lament of the Sweated" which we review in another column. Although this may seem an ideal solution, the time is hardly ripe for it yet, but it is over-ripe for the extension to home workers of the sanitary advantages secured to factory and workshop hands. Advantages would accrue not only to the workers but to the purchasers of their produce, for the present system which allows of clothes and other articles intended for sale to be heaped up on the beds and tables of a den used for both eating and sleeping by the wretched toiler who calls it "home," must surely lead to the dissemination of disease when the goods are distributed to the public. On this point the committee might well have sought more direct evidence. It strengthens us in asking the Government to give the recommendations of the Select Committee on Home Work its early and thorough consideration. In the mean time health officers should urge by all means in their power on their local authorities the enforcement of such powers as the committee has reminded them that they possess. The trade interests involved in certain districts doubtless clash with the sanitary interests of the community in this as in many other matters, and it affords an additional argument for demanding that the security of tenure of medical officers of health should cease to be dependent on private interest and caprice.

Medical Education in France.

WE have received the annual *Numéro des Etudiants et des Praticiens* published by the French weekly medical journal *Le Progrès Médical*. It is on the same general lines as the Students' Number of THE LANCET and it supplies a very interesting and complete summary of the educational facilities afforded to the student and the practitioner of medicine in France. In addition it supplies valuable information regarding the regulations for the various examinations in the different universities and general advice to the practitioner regarding the laws governing medical education and practice, and is in effect a very complete presentation of all that concerns the official aspect of the medical curriculum and the profession of medicine. It opens with an address to the student in which he is advised to avail himself of the courses of instruction provided by the Faculty of Medicine of his university, and to seek to acquire the habit of observation. The necessity for practical work is strongly emphasised and the student is enjoined to go to the hospital daily from the time that he commences the study of medicine, and to endeavour to form his own opinions in regard to cases. The importance of a due perspective in regard to his work is also most strongly insisted on.

The actual subject matter of this special number is divided into four parts, the first of which is devoted to a general account of the universities and schools of medicine and to the general arrangements for medical students and practitioners. There are 15 universities in France and one in Algiers, but only seven of these—viz., Bordeaux, Lille, Lyons, Montpellier, Nancy, Paris, and Toulouse—possess a Faculty of Medicine. There are, however, in addition 17 schools of medicine, divided into two classes—schools for the complete curriculum, comprising Marseilles, Nantes, Rennes, and Algiers, and preparatory schools at Amiens.

Arras, Angers, Besançon, Caen, Clermont, Dijon, Grenoble, Limoges, Poitiers, Reims, Rouen, and Tours. In the former students can study for the whole 16 terms of the curriculum, in the latter only for the 12 early terms, and in both cases the final examination must be taken before a faculty. There is a dean (*doyen*) at the head of each faculty who is appointed by the Minister of Public Instruction for a period of three years, and is chosen from the titular professors. The professoriate is divided into two classes—titular professors and *agrégés*. The latter are appointed for stated periods, usually nine years, but the period can be extended by the Minister. They assist in the examinations, replace the professors when they are absent, and give courses supplementary to those of the professors. There are two varieties of the diploma of Doctor of Medicine in France—that of a university and that of the State. The university diploma is open to foreigners; it is purely academic and is only of value as a scientific qualification. It does not confer the right to practise or any other of the privileges of the State diploma. Certain regulations must be conformed to, certain examinations taken, and fees paid amounting to 1400 francs in order to obtain this diploma. For the State diploma the curriculum is four years, divided into 16 terms. Various examinations have to be passed, a thesis written on some subject, and fees of 1390 francs paid. This part also contains information regarding the military, naval, and colonial medical services and the various associations of students both in Paris and elsewhere.

The second part is devoted to the University of Paris, to the hospitals and institutions in that city, and to the various medical societies. The Faculty of Medicine of the University of Paris was founded in 1808 in succession to the Ecole de Santé, which was itself the successor of the old Faculty of Medicine suppressed in 1793 at the same time as the College of Surgery. Full information is given of the various courses of lectures to be given during the academic year 1908–09 and of the special courses to be held during the vacations. The various hospitals of Paris are described, the staff of each is given, and the courses of instruction and the clinical facilities afforded by each are set forth. A special chapter is devoted to the Pasteur Institute and Hospital. The institute is described and the nature of the work carried on there is briefly outlined. It is of interest to learn that since 1889 more than 1000 persons have attended the lectures and practical courses of microbiological technique, while nearly an equal number have attended the lectures only, showing what an important part the institute has played as an educational body as well as a home of research. A special chapter is devoted to the consideration of the preliminary scientific education of the medical student who has to produce a certificate of having passed the P.C.N. (i.e., physics, chemistry, and natural history). This preliminary year is under the control of the Faculty of Science. The four dental schools in Paris are next described. The dental course extends over three years and the examinations are carried out by the Faculty of Medicine. The fees vary from 1000 to 1500 francs and the examination fees amount to 250 francs. The second part is brought to a close by an interesting account of the various medical societies. The constitution of the well-known Academy of Medicine is detailed and the prizes offered by it, amounting to nearly 60, are enumerated.

The third part is concerned chiefly with the provincial universities and schools, and gives the various courses of lectures and practical work afforded in them. An interesting appendix to it gives brief details of foreign universities in which the French language is employed, including the Belgian universities of Brussels, Ghent, Liége, and Louvain, the Universities of Geneva, Lausanne, Bucharest, and Jassy, and the Faculties of Medicine of the Laval University in Quebec and Montreal. The fourth and concluding part is specially addressed to the practitioner. It opens with some general advice to those newly qualified concerning registration, starting in practice, professional secrecy, the signing of certificates, responsibility, and the many difficult problems with which the professional man may be called upon to deal. The various laws, rules, and regulations concerning medical practice are then summarised, including special laws dealing with the practice of pharmacy and the supply of therapeutic serums and similar products. The various societies for professional assistance and protection are next described, with their objects and aims. The concluding section is devoted to the thermal stations and mineral springs of France and gives useful accounts of the chief features of these waters and the indications for their use. *Le Progrès Medical* is to be congratulated upon this very useful production; it should be of great value to all people in this country who are interested in medical education in France and to those who propose to pursue post-graduate or vacation courses of study in Paris or at any other of the great medical centres in France.

Annotations.

"Ne quid nimis."

NATIONAL HEALTH.

ON Dec. 11th the third annual meeting of the National League for Physical Education and Improvement was held in the Jerusalem Chamber adjoining the south side of Westminster Abbey under the presidency of the Bishop of Ripon. His lordship, in moving the adoption of the report and the accounts, said that the object of the league was to make people as physically "fit" as possible. It had lately been realised that the mind could not be properly educated unless the body was so too. By means of proper care and forethought much infantile mortality might be prevented. The Lord Mayor, who seconded the motion, said that unless they began with the child they would never teach the alphabet of regeneration. A pure milk supply was of the most vital importance. He was going to do all he could to make his year of office a children's year. The report and accounts were adopted, the former containing a recommendation that Poor-law authorities should be granted powers to acquire farms in Canada and other suitable sites in the empire. The Archbishop of Canterbury said that they could not separate man into two parts. Both the physical and the spiritual sides must be dealt with. It was often asked why the legislature did not do something, but the legislature had done its part, it was owing to the apathy of the public that so little had been done. The meeting then terminated. For our part we think that the problems which the league has set itself to solve are among the most

difficult of those many problems which confront us to-day. The solution of them, not only in this country but in every modern civilised country, lies at the very root of the modern industrial system. It involves questions of child labour, of the labour of parents, of the labour of women in mills and factories, of proper housing, and of provision of playgrounds. To solve the problems will require a system of national self-denial and of a real public spirit which at present seems to be absent. But the first step to the solution of any problem is the wish to solve it and it is cheering to find that the National League has at least got so far on its toilsome journey.

A LONDON WORTHY AND TALL BUILDINGS.

THE Clarendon Press has issued recently a reprint of "The Survey of London," made long ago by John Stow, the famous Tudor tailor. It forms an archæological document of exceptional interest to all who feel any curiosity concerning the development of the greatest city that the world has ever seen. Mr. Charles Whibley bases an article in the December number of the *National Review* on this fascinating volume and calls attention to Stow's great antipathy to tall buildings. He lived in an age when the timber houses which were destined to be swept away by the Great Fire were replacing many of the older stone buildings. This pleased Stow the more in that men were not tempted to rear their wooden structures high up into the air. Not only did he inveigh against the iniquity of those who built presumptuously, but he quoted two "awful examples" of the fate which would surely overtake them. Alderman Angell Dune, who set a high brick tower upon his house, was struck with blindness and unable to gaze upon his handiwork, and Richard Wethell was punished for the same offence by becoming "in short time so tormented with goutes in his joynts, of the handes and legges, that he could neither feed himself, nor goe further than he was led, much lesse was he able to climbe, and take the pleasures of the height of his Tower." The object of these lofty houses seems to have been a display of importance. At that period they were certainly not erected with the aggressive motive which inspired the architecture of so many mediæval Italian towns and which was, of course, the desire of every family of consequence to possess a vantage ground from which its members could shoot down upon their neighbours' houses in times of civil feud. Bologna and San Gimignano, to name only two towns, have many beautiful examples of such towers still standing. Neither can their motives have been those which have led to the erection of such "skyscrapers" as disfigure New York city of to-day. Although many Americans of æsthetic sense would perhaps gladly inspire the streets of their metropolis with something of the Tudor spirit, and share the pious assurance of John Stow that the sins of all modern children of Babel will be visited upon their bodies, there can be no doubt that the tall city building has come to stay. Modern economy of ground-space in cities and concentration of business interests make this fact apparent, and London street architecture is fast responding to its insistent commercial necessity. In a recent annotation we called attention to the fact that a man who lives at the top of a high building has the advantage of exceptionally pure air to breathe. But there are many interests to consider in a community and the blessing of the Londoner on the house-top is the bane of his brothers in the street. We cannot put the case in better language than in that of Mr. Whibley's article: "London is a true city of the North, and cannot endure tall houses, which shut out the light and cast long shadows. Nothing should interrupt the rays of the sun, always too few, which fall upon its streets. ..... (London's) citizens are free to heap up mountains of brick and mortar, of stone and iron. ..... in order that they may swell an overfull pocket, the poor wayfarer must walk up and down like a pigmy at the bottom of a sightless airless tank." He might almost have written of certain streets "a septic tank," for the living bacterial population of narrow thoroughfares which are never exposed to the antiseptic rays of the sun must be inconceivably great. We can only hope that the widening of streets will in some measure keep pace with the upward growth of the buildings which bound them, and that our building laws may forbid in perpetuity the appearance in any British town of such a skyline as appears to be inseparable from the great business centres of America. If a John Stow redivivus were to cross the Atlantic we fear that even the full-flavoured breadth of the Tudor vocabulary would fail to do justice to his emotions on approaching New York.

REGISTERED MEDICAL WOMEN AND THE POLITICAL FRANCHISE.

ON Nov. 2nd a committee of the Association of Registered Medical Women of the United Kingdom wrote to the Prime Minister asking for an opportunity of laying before him certain facts in favour of the extension of the political suffrage to women. The request was supported by the results of an inquiry which showed that of all the registered medical women resident in the United Kingdom 538 were in favour and 15 against the extension. The 16 signatories to this communication included Mrs. Garrett Anderson, M.D., Dr. Sophia Jex-Blake, Dr. Julia Cock, Dr. Jane H. Walker, Mrs. Mary Scharlieb, M.D., Mrs. Florence N. Boyd, M.D., and Dr. Louisa B. Aldrich-Blake. Mr. Asquith, in his reply, expressed his interest in the figures submitted to him and requested the association to make its representations in writing, as he regretted that pressure of public business would prevent him from receiving a deputation of medical women. On Dec. 10th the same ladies, with the addition of three others, forwarded a memorandum to Mr. Asquith in support of their claims. We are unable to print the document in full in this issue but summarise its arguments, which, we may mention, are expressed in studiously temperate language. The association claims that: 1. Legislation not infrequently deals with matters directly concerning medical practitioners, and the interests of all such practitioners should be protected by the vote. 2. Medical women are a tax-paying and self-supporting body and afford a striking example of taxation without representation, which is opposed to the first principles of English liberty. 3. Many medical women are graduates of a university and as such are entitled to the university franchise, a privilege from which they have been excluded by an arbitrary decision. 4. Members of the medical profession are called on to perform services of an arduous and responsible nature to their fellows and to give skilled advice to the State but receive no recognition of these services. The voteless position of women practitioners is especially anomalous, as they possess legal power to deprive men of their right to vote by signing certificates of insanity. 5. Work amongst all classes has given medical women an especial insight into the disabilities from which their sisters suffer through lack of political representation. The unhygienic conditions of poor women and children and the problems presented by criminal and intemperate women and by prostitution are closely associated with the economic conditions of female labour. 6. Women should have a direct voice in legislation upon these matters and also upon questions of education, religion, guardianship of children, housing of the poor, and all issues of public health and morals. 7. The possession of the vote would

stimulate women to increased readiness to undertake work in branches of public service in which the coöperation of women is specially required and would foster their consciousness of citizenship.

CHRISTMAS CHEER PSYCHOLOGICALLY AND PHYSIOLOGICALLY CONSIDERED.

WHEN persons determine to make a season festive they as a rule pay little heed to the teachings of physiology about the evils of excess or to what chemistry may have to say in regard to the composition of the good things which they mean to enjoy. Undue indulgence, however, brings at length a convincing proof of the physiological machine having been overtaxed in the shape of various unpleasant symptoms eloquent of the action of toxic agents. If, in short, the body cannot deal with the amount of food administered to it part of that food becomes more or less a poison. Nevertheless, there can be no doubt that when a person is situated in circumstances which tend to make him happy his digestive powers are stimulated and increased. Christmas is a time of good cheer and therefore is a season which should be calculated to help those psychical influences which are an important factor in the great processes of alimentation. The meal partaken in the house of mourning has a much less chance of actually ministering to the needs of the body than has a meal partaken in the house of joy. This is an interesting example of the effect of mental influence to which to some extent the digestive functions are subservient and which is constantly in evidence. No man unless his instincts are more brutal than refined sits down for choice to a meal alone or drinks his wine in solitary silence. He regards his food not merely as a bodily necessity but as something also that can be artistic and elegant, and he is led to seek an environment during a repast which is mentally as well as physically congenial, and in doing so his digestion is facilitated. To partake of food under the influences of pleasurable refinements is an excellent physiological proceeding. There is nothing physically or physiologically immoral therefore in the cheerful feast; it is not a sin to enjoy food or to secure the partaking of it under agreeable surroundings. On the contrary, such procedure is perfectly compatible with physiological law, and it is not at the risk of offending physiology to wish those persons a merry Christmas who can enjoy creature comforts wisely, who know the evils of excess, and who act accordingly.

FRESH AIR IN THE TREATMENT OF PNEUMONIA.

IN the *American Journal of the Medical Sciences* for November Dr. G. W. Norris has reported good results from fresh air in the treatment of pneumonia at the Philadelphia General Hospital, where the type of the disease is of unusual severity. Most of the patients are advanced in years and often suffer from arterio-sclerosis and chronic nephritis, and a large number of tramps and drunkards is also comprised. As might be expected, the mortality was high—53 per cent. before adoption of this treatment and 43 per cent. after its adoption. If the patients who died within the first 24 hours—i.e., were moribund on admission—be deducted the latter mortality was 38 per cent. Apart from the constantly open doors and windows no other innovation was made in the previous treatment. Dr. Norris observes that the use of alcohol is steadily falling more and more into disfavour, and justly so, since it does more to relax the vaso-motor system than to stimulate the heart, and that it has been shown by the researches of Paessler and Rolly that death in pneumonia is due to failure of this system. He admits, however, that habitual drunkards are often benefited by a reasonable amount of alcohol. Sponging with cold water was used frequently and with good results, not so much for the purpose of reducing the temperature, which it does satisfactorily, but with a view to increase the tone of the vaso-motor system, for which purpose it seemed to be the most useful remedy. The value of fresh air is illustrated by the case of a big negro on the third day of an attack of pneumonia. In the general medical ward he was restless, feverish, and panting, the typical picture of the anguish so often seen in these cases. An hour later he was seen in the pneumonia ward to which he had been transferred. It was a cold March day and the doors and windows were wide open, so that a constant current of fresh cold air blew over the beds. The patient greeted Dr. Norris with a smile and said, "I feel like another man here." It certainly requires, as Dr. Norris observes, some courage and persuasive power over the patient's relatives to adopt this treatment but once tried he is convinced that the practitioner will not abandon it. We may add that good results have been reported from the open-air treatment of pneumonia by another American writer, Dr. Northrup, and also by Dr. G. E. Rennie in the Prince Alfred Hospital, Sydney. The last writer places his patients at once on the balcony or verandah of the hospital, where they are kept night and day. A screen is kept round the head of the bed to prevent the cold air from blowing directly on the patient. This seems to us a necessary precaution, for however valuable fresh air may be few will regard a draught as desirable in pneumonia. Dr. Rennie at first hesitated to adopt this method when complications such as bronchitis were present but even then he found it equally successful. In one case which he reports, a girl, aged 12 years, had marked dyspnœa and cyanosis and a temperature of nearly 104° F., a rapid weak pulse, and extensive labial herpes. There were signs of consolidation at both bases. She was inclined to be delirious and had not slept for two nights. She was placed on the balcony with a screen round her head. On the first night she slept well and improved much.

MORTALITY OF THE MEDICAL PROFESSION IN GERMANY.

A CORRESPONDENT writes: "Investigation into the mortality of the medical profession in Germany has been published[1] by Mr. A. Böhme, an actuary in Leipsic. He emphasises the fact that the oft-quoted mortality given by Caspar in 1835 was considerably too high, owing to an erroneous method of calculation. In 1886 the Gotha Lebensversicherungsbank published an investigation into 1058 deaths of medical men, a larger number than had been collected up to that time, and sufficient to give trustworthy results at least as to the main features. Alongside of this the author places Geisser's investigations on the medical men of Saxony and Weinberg's on those of Würtemberg, which he examines critically. Among the results which emerge from his investigation it will be found that in all the figures there is an excess of mortality at the time of entrance into the profession, continuing for some five years thereafter in a decided degree, whilst the lowest mortality is found almost as late as the middle of the thirties. Radestock (who continued Geisser's work) suggests as the cause of this not merely the influence of hereditary disease and of acquired defects (e.g., alcoholism), but also the fact that the younger practitioner has not developed in his system the necessary proportion of alexins and antitoxins which contact with infective disease has produced in older physicians. The figures in each case give a mortality among medical men in

[1] Zeitschrift für Versicherungs-Wissenschaft, 1908, p. 652.

excess of the general mortality; this occurs at all ages and is most marked in Saxony at almost every age, is less marked in the Gotha experience, but only occurs after age 40 in Würtemberg.

MORTALITY OF MEDICAL MEN COMPARED TO NORMAL (= 100).

Ages.	Gotha insured.	Saxony.	Würtemberg.
26 to 45	125·9	124·6	92·4
46 ,, 65	109·6	128·9	117·8
26 ,, 65	114·1	127·5	107·8

There is but little difference between the mortality of town and country practitioners, the place of residence having much less influence than the conditions of the profession. Westergaard found the same fact in his investigations among Danish medical men. Karup and Gollmer consider the excessive mortality to be due to professional risks—e.g., exposure to typhoid fever, unfavourable conditions of weather and temperature, and the incessant activity of the profession. Looking at the mortality from individual causes, practising physicians show the excess chiefly in respiratory diseases (including pulmonary tuberculosis), in apoplexy, and in typhoid fever. The mortality from tubercle is 106·7 per cent. of the expected mortality, that from infectious diseases no less than 131 per cent. Among minor points brought out are the two following:—Radestock's continuation of Geissler's Saxon investigations indicates a slight rise in the expectation of life for medical men; the Gotha figures show that the mortality of medical lecturers in the universities closely resembles that of medical men generally."

MILTON'S BLINDNESS.

John Milton is generally supposed to have suffered from amaurosis, of which the old name was *gutta serena*. In the great autobiographical opening to Book III. of "Paradise Lost" the blind poet, apostrophising Light, plays on the Latin name in well-known lines:

> "Thee I revisit safe,
> And feel thy sov'reign vital lamp; but thou
> Revisit'st not these eyes, that roll in vain
> To find thy piercing ray, and find no dawn;
> So thick a drop serene hath quench'd their orbs,
> Or dim suffusion veil'd."

According to others, among whom was his late biographer, Leslie Stephen, Milton's complete loss of eyesight was due to glaucoma. To judge from the passage above quoted, the poet himself was not entirely convinced of the nature of his disease, though he gloried in the fact that he had incurred it in the service of his country. The lines seem to express alternative etiologies. The darkness fell upon him soon after his completion of the "Defensio Populi Anglicani" in 1654. "Paradise Lost," therefore, was the *magnum opus* of a blind man. Now, though such an affliction as complete loss of the use of a sense might be supposed to militate against the highest kind of achievement in art, it is a question whether in Milton's case such loss did not enhance his performance. According to Jonathan Richardson, who wrote when Miltonic tradition was still quite fresh, the poet dictated his poem in snatches between 1658 and 1662—ten lines to a chance caller, 20 lines to his daughter Anne whom he would wake up in his grim paternal fashion to act as his amanuensis during the hours of a sleepless night. According to a tradition traced to the third Mrs. Milton the poet dictated his poem, in batches of some 300 lines at a time, after rising in the early morning. These batches were composed during night vigils. Whichever tradition we accept, the fact remains that Milton's great epic was recited and dictated; it was the work of a *trouvère* of supreme genius; it owed nothing in the first instance to the restraining influences of the pen. Hence the Miltonic harmonies, the stresses, cæsuras, crowded syllables, pauses, which lend the poem its peculiar majesty and charm. Blindness for once may be said to have been beneficent when we consider the manner in which "Paradise Lost" was composed. Milton's insomnia deserves a word in passing. He was a man with memories when he began the composition of his poem at the age of 50 years, and these with his gout and his active mind may well have kept him awake or awakened him in the small hours. But his regimen was a starveling one, his dinner often consisting of olives. And he went to bed at nine like a man of great age.

ANIMATED PHOTOGRAPHY IN NATURAL COLOURS.

ON Wednesday evening, Dec. 9th, there was a crowded meeting at the Royal Society of Arts, London, to hear an interesting lecture given by Mr. G. Albert Smith, F.R.A.S., on Kinematography in Natural Colours. Sir J. C. Lamb, C.B., C.M.G., presided. In THE LANCET of May 9th last (p. 1358) we recorded a demonstration of Mr. Smith's invention which was given at Urbanora House, London, under the auspices of Mr. Charles Urban, F.Z.S., who has greatly assisted Mr. Smith in his endeavours. Mr. Smith now showed what progress he had made in the interval and his results when thrown upon the screen were received with much applause. Mr. Smith explained in outline the three-colour theory and said that six years ago when Mr. Urban invited him to take part with him in a series of experiments to obtain animated photography in colours it was upon that principle that the experiments were undertaken, but a difficulty was found in superimposing the three colour pictures as they could not be made to "register" accurately, and it was decided to try to make them superimpose in the mind of the observer by running the film through the machine very fast. This was an improvement but the colours were extremely pale, in fact, washy. Mr. Smith then set to work to make a film sensitive to all colours, especially red, and to reduce the records necessary from three to two, because in using three colours they cannot be replaced quickly enough to obtain the superimposition. It was necessary also to devise a scheme which could be readily adapted to all existing kinematographs and bioscopes and to the ordinary standard film of the usual perforation. Eventually Mr. Smith succeeded in making a sensitised film which when exposed with the use of small rotating transparent coloured screens inserted in front of or behind the lens of the camera filtered the light and recorded, in a scale of greys ranging from white to black, on one film, the corresponding range of colour. This record is a record of colour sensation as the spiral on the phonograph cylinder is a record of sound waves. In Mr. Smith's words, "the colour is there in black and white." White represents white, yellow is represented by a slight tinge of grey, and for the other colours the records get darker and darker till they get down to black. From these films or colour records the original colours are reproduced on the screen (sheet) by the optical lantern with the interposition of the rotating coloured disc, as described in THE LANCET of May 9th. This range of colours Mr. Smith has been able to represent in two records by having in the camera a revolving shutter with scarlet and blue-green portions alternately arranged. Through the scarlet shutter he records white, yellow, orange, and reds. Through the blue-green shutter he records white, yellow (again), green, and a little blue. Only a little blue is required, as too much blue is mischievous and gives very pale colours. These pictures are taken at the rate of 32 per second and they must be taken in the bright sunshine. This rate is twice that necessary for the ordinary black and white films. Mr. Smith reminded his audience that very great

improvements have been made in taking black and white pictures during the past 12 years, and if lens makers, emulsion makers, and machinery makers will do their share great improvement will be possible in animated photography in colours. He emphasised his obligations to Mr. Urban for his assistance in the mechanical part of the work. The lens maker has done nothing so far to contribute towards this success and Mr. Smith wants him to do so. Mr. Smith, moreover, has to take the ordinary film used for black and white work and to sensitise it himself to make it see colours as he wants it to. He stated that he has to make a harmony between the human eye and the plate, as if the average observer were asked to state in order the luminosity values of colour he would probably put white at the top and then give yellow as the next brightest colour, afterwards naming in order orange, red, green, blue, and violet, but the photographic plate does not give that answer at all. The photographic plate says white at the top but blue next, and it places yellow very low down in the list and red it scarcely knows anything about at all. It was thus necessary to alter the plate to make it see colour as we see it. Mr. Smith added the interesting information that it was in watching the brilliant uniforms at the funeral service at Windsor of the late Queen Victoria that he first took an interest in colour photography, regretting that he could not record the scene. Mr. Smith showed on the screen several attractive and life-like pictures, including persons with pink dresses, red coats, green sashes, red parasols, plaid shawls, and so forth—viz., "An Animated Duchess of Devonshire," a lady smelling and admiring differently coloured flowers, a row on the sea, a motor-boat race, Henley Regatta, a game of croquet, the red-coated Gordon Highlanders marching to church at Aldershot, a grey donkey eating carrots, a rabbit-hutch with rabbits of several colours and green cabbage leaves, the band of the Cameron Highlanders marching down the West Pier at Brighton, a farmyard, and a scene entitled "Reaping" where the sleek or glossy brown of the horses' coats was admirably and perfectly rendered, as also was the glitter of the varnish on a racing yacht as it veered in the sunshine. Sir Henry Truman Wood thought that the greys, most difficult usually to render, were perfect, but the blues and the greens might be slightly improved; he added that if nothing further were done a great advance had been made and the meeting would be a memorable one. A hearty vote of thanks to Mr. Smith and Mr. Urban terminated the meeting.

THE LATEST "LUSUS NATURÆ."

SPANISH journals are commenting in the day now passing on a "lusus naturæ" which to them is as strange as any recorded in the annals of teratology. To the headquarters of his mission in Spain, the Father Agostino Camarizano writes from Alanquer in Manaos that a fisherman's wife, approaching her confinement, having missed her husband for many hours, went down to the seashore in quest of him, only to find his dead body lying on a rocky recess. He had manifestly been killed in an encounter with a huge serpent, which was still coiled round him—a reptile known in those parts as the "giboia." Frantic under the impression of the gruesome spectacle the poor woman was shortly afterwards seized with the pains of parturition and was delivered of a male child, in all respects normal but covered with a skin resembling that of the "giboia," having similar scales and markings, red and black. This integument the practitioner who was called in found to be non-adherent to the true skin, the "cutis vera"; it simply covered the normal epidermis. To keep the child alive it had to be kept continually moist on the surface, necessitating frequent bathing throughout the 24 hours. If the bath was suspended for any considerable part of the day the skin with its scales began to swell. Further, the woman told her medical attendant that when she gave it the breast the infant would make with its tongue a kind of tiny hiss resembling that of the reptile. All this notwithstanding, the Father Agostino baptised the little monster in the chapel of the Alanquer Mission, and the local authority has made an official entry of the birth in the parish register. This latest Spanish freak is probably not so fabulous as at first sight it appears, inasmuch as it is, no doubt, an example of so-called fœtal ichthyosis. In this condition the skin of the fœtus is covered by thick horny epidermic plates, yellowish in colour, separated by fissures of a red or bluish tint. The appearance has been compared to that of a coat of mail, or to the covering of an armadillo, and it is not surprising therefore that the ignorant Spaniards should have thought the infant was covered with the skin of a serpent. The story that the medical man called in found a sort of outer covering for the true skin is in accordance with the fact that the scales are derived from the stratum corneum, the rete Malpighi being practically unaltered. It is of extreme interest to note in the description of this so-called monster that it was necessary to keep the skin constantly moistened with water, since in these cases there is very marked atrophy of the sebaceous glands. As Ballantyne points out in his interesting account of this rare condition, the weak and buzzing cry, which might well be thought to resemble the hiss of a serpent, was called attention to by Vrolik as long ago as 1849 and is due to the extreme eversion of the lips and the marked deformity of the mouth which are usually present. Naturally enough, a maternal impression is invoked as the cause of such a monster. As a matter of fact, this disease usually develops as early as the fourth month of intra-uterine life, and in the great majority of cases both parents are quite healthy, although it occasionally affects successive children of the same mother.

KING EDWARD'S HOSPITAL FUND FOR LONDON.

ON Dec. 14th, at Marlborough House, the Prince of Wales presided over a general meeting of King Edward's Hospital Fund for London, when it was stated that the amount received by the Fund for the present year up to Dec. 10th and after payment of expenses amounted to £156,748. In moving the adoption of the report, which was carried unanimously, the Prince of Wales said that the donations for 1908 included the munificent gifts of £100,000 from Lord Mount-Stephen and £10,000 from Lord Iveagh, both sums being placed to capital. His Royal Highness referred with satisfaction to the fact that the Fund had been able to allocate to hospitals, convalescent homes, and country sanatoriums for consumption £140,000, an increase of £19,000 over the sum distributed last year. Among the largest grants are that of £5000 more to the removal fund of King's College Hospital, making a total of £27,000 granted to this hospital for the purpose, and £12,000 to the London Hospital, including £2000 towards the reduction of its debt. The report is a very satisfactory one and as his Royal Highness pointed out it is most encouraging to think that in the past ten years almost without exception there has been a steady increase in the annual amount available for distribution. The Fund continues to encourage the amalgamation of the smaller hospitals and also adheres to the policy of aiding the extension of hospitals situated in, or near to, the poorer districts and remote from the larger general hospitals. In the report of the Convalescent Homes Committee it is noted with regret that the number of sanatoriums for consumption which have applied for grants is small and the committee also calls attention to the

apparent absence of facilities for the transfer of tuberculous patients from London hospitals to country institutions at a time when such patients most need it. Referring to this committee's report, the Prince of Wales remarked that if the applications received by the committee this year were to be taken as a measure of the supply of beds in the country for the consumptive poor of London, he could not help feeling that the supply was inadequate. One step towards meeting this need had already been taken by the formation of the National Association for the Establishment and Maintenance of Sanatoria for Workers Suffering from Tuberculosis. The Benenden Sanatorium is the first outcome of this movement and His Royal Highness thought that such an effort on the part of the workers themselves to deal with this great question deserved the encouragement and support of the Fund. It should be mentioned that the London Parochial Charities have again given their annual grant of £1000 for convalescent homes and the League of Mercy will probably be able to add to the Fund £18,000.

THE IMPORTATION OF FOREIGN MEAT.

THE Local Government Board has recently issued a circular in which it is pointed out that the public health regulations in regard to foreign meat, referred to in a leading article in THE LANCET of Feb 1st, 1908, will take effect on and after Jan. 1st, 1909. It will then be the duty of the medical officer of health in every case in which notice under these regulations is received by him from the officers of Customs to decide whether meat which has been detained by those officers falls within the classes specified. If so, he is required to give a notice forbidding the removal of the meat for any purpose other than exportation. If an importer to whom a notice of the kind has been given desires not to export the meat but to use it for some purpose other than sale for human consumption, the procedure to be adopted to enable him to do so is provided in the regulations. These regulations refer to boneless meat, "boxed" meat, boxed pork, tripes, tongues, and kidneys, which, according to the category in which they are placed (Class I. or II.), are dealt with correspondingly.

A WISE SUGGESTION.

THE enormous bequests of the late Mr. Henry Isaac Barnato have included a legacy of a quarter of a million pounds to his trustees for the purpose of founding a hospital or other charitable institution in memory of his late brother, Mr. Barnett Barnato, and his late nephew, Mr. Woolf Joel. The application of this fund is to be vested in the sole hands of the trustees. A correspondent in the *Daily Telegraph* has pointed out that if this magnificent sum is to form the endowment as well as the building fund of a hospital the Weir bequest controversy of large *versus* small hospitals will be revived. In a subsequent issue of the same paper Mrs. Watt Smyth makes the suggestion that the money should be spent in constructing and endowing a bungalow hospital settlement in hygienic country surroundings for the open-air treatment of school children found by medical inspection to be suffering from pulmonary tuberculosis. She gives evidence to show that this disease will be diagnosed in an appreciable number of children attending elementary schools, and accepting her estimate of 1 per cent. (which was obtained in a London school of which Mrs. Watt Smyth is a manager) it is obvious that their treatment will shortly become a serious problem. For the sake of the suffering children themselves, as well as of their schoolfellows and their families, it is very desirable that they shall be treated in a special hospital settlement and we commend Mrs. Watt Smyth's timely suggestion to the careful consideration of the administrators of the Barnato trust.

FLIES AS A NUISANCE.

A REPORT by Dr. W. H. Hamer presented to the London County Council on the extent to which fly nuisance is produced in London by accumulations of offensive matter was ordered to be printed in October and is of great interest. A similar inquiry was undertaken in 1907, the results of which were printed in January of 1908. Upon this we commented in our issue of March 21st, p. 876. The present report is upon the same lines as the former, being illustrated with curves and diagrams. In 1908 the places of observation were 141 surrounding nine sets of premises—namely, "four depôts, at three of which stable manure or house refuse, or both, were manipulated; two stable premises, a cowshed, a glue and size manufacturer's premises, and a jam factory." In 1907 the places of observation numbered 163 surrounding 12 centres of practically the same nature as in 1908, except for the addition of a cattle market. The various kinds of flies were in both years nearly all—i.e., nine-tenths—Musca domestica; there were also a few bluebottles and a fair number of the Homolomyia canicularis which closely resembles Musca domestica but is smaller. There was one curious difference, however, in the two years. In 1907 no instance of Stomoxys calcitrans, a biting fly, was found, while in 1908 at one station (No. 7), a cowshed, the stomoxys was found in large quantities. A few were also found at No. 6 station which was stables. As regards the question of the carriage of the infection of diarrhœa by flies Dr. Hamer says:—

> Comparison of the curves for 1908 and 1907 brings to light, moreover, a striking fact regarding the behaviour of the fly and diarrhœa curves in the two years. From the middle of August to the end of the first week of October, 1907, the number of flies was practically stationary. Again, from September 4th to October 5th, 1908, the number of flies was also practically stationary. Further, judging by the total number of flies caught, in relation to the number of places of observation in 1907 and 1908, practically the same extent of prevalence of flies (in the parts of London concerned) was maintained during these two stationary periods of the two years in question. Yet during the stationary period of 1907 diarrhœa was steadily increasing, while during the stationary period of 1908 diarrhœa was steadily declining. In order to explain this phenomenon on the fly hypothesis, it becomes, therefore, as has been already surmised, necessary to assume that in determining variations in amount of diarrhœa, importance attaches not so much to the number of carriers of diarrhœa organisms, as to the extent of distribution of the organism itself. If this be admitted, however, it is (on the assumption that flies cause diarrhœa) clear that precise correspondence of the carrier curve—i.e., the fly curve—and the diarrhœa curve cannot be expected to occur.

And Sir Shirley F. Murphy in his introduction says:—

> The report also refers to the question of diarrhœa. No final decision can be given, but in the present state of knowledge it appears desirable to maintain a critical attitude as regards acceptance of the view that the fly acts as a carrier of the diarrhœa organism.

MENINGEAL HÆMORRHAGE IN ACUTE RHEUMATISM.

AT a meeting of the Société Médicale des Hôpitaux of Paris on Nov. 13th M. Moutard Martin and M. Pierre Weil reported a case of a very rare complication of acute rheumatism—meningeal hæmorrhage. A woman, aged 36 years, was admitted into hospital on Oct. 26th, 1907, for a third attack of rheumatism. She had always been delicate. In 1905 she had acute rheumatism and again in July, 1907. Her present attack began on Oct. 20th with a chill and sore throat. The shoulder-, elbow-, and wrist-joints were attacked and there were intense headache and vomiting. On admission the temperature was 100·4° F. and the joints mentioned were red, hot, swollen, and very tender. The heart was normal and the urine did not contain albumin. Under sodium salicylate the pains diminished and became limited to the right wrist and the temperature fell to 99·5°. On Nov. 18th the wrist was still swollen and painful and the temperature was about 99·5°. On the 22nd the patient was

taken out of bed for the first time and was seated in an arm-chair. Suddenly, about 3.30 P.M., she uttered muffled cries and lost consciousness and her respiration became panting. Her expression was haggard, her face was congested, and her eyes projected. Consciousness was regained in about ten minutes but she remained in a state of hebetude, muttering incoherent words. In the evening she was prostrate and complained of severe headache and vomited. Kernig's sign was not present, the neck was supple, and the pulse was 96 and regular. On the following days she remained in a state of torpor with a severe headache, which nothing relieved, and vomiting. The temperature gradually rose to 103·1° and then fell again. On Dec. 1st the temperature was 101·1° and the wrist-joint was again inflamed. On the 7th the patient was much better and the temperature was 99·5°. On the morning of the 8th she suddenly cried out that she was being suffocated. She was found sitting up in bed and covered with perspiration, her face congested, and her eyes widely open and projecting, as in the previous attack. She was much excited, had the impression that something had burst in her head and that she was about to die, and complained of intense occipital headache. In the evening the temperature was 98·6° and she was calmer and seemed to be entering into a state of coma. She vomited and had severe headache. The pupils were small and did not react to light and there was divergent strabismus. The neck was not stiff but there was a suspicion of Kernig's sign and the plantar reflex was extensor. On the 9th she was comatose. Lumbar puncture yielded blackish-red fluid. Centrifugalisation separated this into a yellowish fluid and a large clot which microscopically was found to consist of pure blood. Direct examination and cultures showed that the fluid was sterile. Death occurred on the following day. The necropsy showed no signs of endocarditis. There was slight interstitial nephritis. The pia mater and the brain were much congested and at the base were blackish subarachnoid clots which descended through the foramen magnum. The condition of the brain was characteristic of cerebral rheumatism. The meningeal hæmorrhage could not be attributed to any other cause than the rheumatism. As regards the nephritis, there was never albuminuria and the arteries were not atheromatous. The symptoms indicated that two attacks of hæmorrhage occurred. Meningeal hæmorrhage has been described in other infectious diseases, such as variola, scarlet fever, measles, tuberculosis, syphilis, septicæmia, influenza, anthrax, diphtheria, and also in acute uræmia.

THE Department of Public Health of Queensland in a bulletin dated Nov. 7th states that for the week ending at noon on that day 1 case of plague was notified—namely, that of a male infant, aged six weeks, who died on Nov. 5th. As regards the Mauritius, a telegram from the Acting Governor received at the Colonial Office on Dec. 11th states that for the week ending Dec. 10th there were 7 cases of plague and 5 deaths from the disease. A telegram from the Acting Governor of the Mauritius, received at the Colonial Office on Dec. 7th, states that for the week ending Dec. 6th there was one case of plague and one death from the disease.

L'Académie de Médecine de Paris at its meeting on Dec. 11th awarded the Godard prize for 1908 to the work of Dr. F. W. Pavy on "Carbohydrate Metabolism and Diabetes," translated by Dr. Aigre.

A DISCUSSION will take place on Wednesday, Jan. 13th, 1909, at 8 P.M., at the Royal Sanitary Institute on the Purification of Water by Ozone and other Chemical Substances. The debate will be opened by Dr. S. Rideal and the chair will be taken by Mr. E. B. Barnard, M.P., chairman of the Metropolitan Water Board. A general discussion is invited.

ON Wednesday afternoon, Dec. 16th, the Education Committee of the London County Council adopted a recommendation to ask the Council at its meeting next Tuesday for power to draw a sum of £10,000 from the county rates for the provision of meals to underfed school children. At the same meeting the committee adopted the report of the sub-committee on the medical treatment of children, with special reference to such children as may require operative or in-patient treatment at the hospitals. The recommendation of the sub-committee is that children thus removed from the direct superintendence of the education authority require no further steps to be taken in their behalf, but that the Council should establish school clinics at suitable centres in the metropolis. An amendment, however, was carried to the effect that financial help should be given to the existing institutions taking charge of such in-patients, and that where the required institutions do not exist the Council should consider whether it should make the provision itself.

THE Midwives Act Committee appointed by the Lord President of the Council to consider the working of the Midwives Act held a preliminary meeting on Wednesday afternoon, Dec. 16th, at the Privy Council office. Mr. Almeric FitzRoy was in the chair and all the members were present. The course of procedure was arranged, and it was decided to hold the first meeting for the hearing of evidence on Wednesday, Jan. 20th. It is requested that any communications to the committee may be addressed to the secretary, Midwives Act Committee, Privy Council Office, Whitehall, S.W.

MANCHESTER INFIRMARY.—On Dec. 1st the old infirmary in Piccadilly was left, as it were, desolate by the removal of all the in-patients to the new infirmary in Oxford-road. For some days preparations for the great flitting had been going on; ward equipments, furniture, and other accessories were taken away in vans but the patients still remained. On that day at noon horse ambulances, landaus, &c., drew up at the infirmary entrance and the first relay of patients was carried down the well-worn steps and carefully placed in the various conveyances. There were five city ambulances, the Salford motor ambulance, half-a-dozen landaus, a couple of "taxies," as they have already been dubbed, and the infirmary's own Cheadle Homes omnibus. The surgical cases, of course, required very careful handling, but wrapped up in blankets they were borne down the steps by the strong and willing arms of medical men, students, and nurses without any of the patients being the worse for the removal from ward to ambulance, the journey to Oxford-road, and the welcome change from ambulance to ward again. All this was accomplished in a damp, chilly fog that added much to the weird character of the scene. In spite of the fog, however, crowds of people watched the proceedings to the end, both round the infirmary railings and at the entrance to the hospital in Oxford-road, for any spectacle is attractive to those who have nothing to do. It was somewhat pathetic to notice that many of the patients took little or no interest in what was being done; others were, of course, quite awake to all that occurred. It was no light undertaking to transfer 120 or 130 patients to a new hospital one and a half miles or more away, and all interested were thankful when the task was finished without any mishap. It had been a hard day for all who had helped to carry through the work. Those patients who were not too ill or too tired to notice their surroundings expressed pleasure at the change. They were "comfortable enough" at the old place "but this beats it hollow" and so on. The link with Piccadilly is at last broken and the associations of more than 100 years with the old infirmary and its history are now gone, but it may still be said—Long live the infirmary.

THE SEX-CENTENARY DINNER OF THE WORSHIPFUL COMPANY OF BARBERS OF LONDON.

THE sex-centenary dinner of the Worshipful Company of Barbers of London was held on Tuesday evening, Dec. 15th, at Grocers' Hall, the Grocers' Company having placed their famous premises at the disposal of the Barbers for the important occasion. The Master, Sir JOHN TWEEDY, F.R.C.S., presided, and, as might be expected in the circumstances, there was an important medical element among the numerous guests. Those present included Sir R. Douglas Powell (President of the Royal College of Physicians of London), Mr. Henry Morris (President of the Royal College of Surgeons of England), Sir Frederick Treves, Sir William J. Collins, M.P. (Vice-Chancellor of the University of London), Mr. Howard Marsh (Master of Downing College, Cambridge), Dr. W. Collingridge (medical officer of health of the City of London), Mr. F. Gordon Browne (Master of the Society of Apothecaries), Sir Thomas Smith (Sergeant-Surgeon to the King), Inspector-General J. Porter (Director-General of the Royal Navy Medical Service), Surgeon-General Sir Alfred Keogh (Director-General of the Army Medical Service), Sir T. Clifford Allbutt (Regius Professor of Physic at the University of Cambridge), Sir W. S. Church (President of the Royal Society of Medicine), Mr. C. B. Lockwood (President of the Medical Society of London), Sir Henry Norbury, Sir Jonathan Hutchinson, Sir James Reid, Sir W. Watson Cheyne, Mr. Thomas Bryant, Dr. D. Ferrier, Mr. A. A. Bowlby, Mr. H. T. Butlin, Mr. W. Arbuthnot Lane, Mr. A. Pearce Gould, Dr. F. T. Roberts, Alderman Sir T. B. Crosby, Mr. H. H. Clutton, Mr. Edmund Owen, Mr. C. W. Mansell Moullin, Mr. W. Bruce Clarke, Dr. J. F. Payne, Mr. A. W. Mayo Robson, Mr. J. H. Morgan, Mr. R. J. Godlee, Dr. S. West, Mr. G. H. Makins, Dr. Dawson Williams (Editor of the *British Medical Journal*), and Dr. Squire Sprigge (THE LANCET). The laymen included the Bishop of Oxford, Sir Robert Ball, Sir Thomas Sutherland, Sir R. Macgregor Stewart (Lieutenant of the Tower), Sir Forrest Fulton (Recorder of London), Mr. E. J. Gregory, R.A., Mr. Anthony Hope Hawkins, the Masters of the Grocers', Mercers', Ironmongers', and Skinners' Companies, Sir John Furley, Mr. F. C. Lingard (clerk to the Company of Barbers), and the Wardens of the Company.

After the usual loyal toasts the MASTER proposed "The Corporation of London and the City Guilds" in an eloquent speech in which he traced the growth in strength and power of the guilds and showed how London and her guilds had always fought the battle of England for freedom and progress. Sir John Tweedy made special and eloquent allusion to the fact that the Areopagitica, that magnificent vindication of the freedom of the press, was written in the City of London, and that, later, it was one of the Members of Parliament for the City whose brave action, supported by his constituency, first made possible the publication in the press of proceedings in Parliament. Sir John Tweedy's speech was punctuated throughout with applause and was felt by all to be a great performance. The toast having been replied to in suitable terms by Mr. Alderman and Sheriff HANSON in the absence of the Lord Mayor of London, the MASTER then proposed the toast of "The Medical Profession," selecting especially the work of preventive medicine for favourable notice. The toast was replied to by Sir R. DOUGLAS POWELL and Mr. HENRY MORRIS.

Mr. D'ARCY POWER then proposed the toast of "The Worshipful Company of Barbers" in an excellent speech in which he traced the connexion between surgery and barbery. He said: I rise with considerable diffidence to propose this toast, indeed my diffidence might have proved insurmountable if I had not thought that it was a duty owing to the position I hold which made it imperative for me to do so. As surgeon to St. Bartholomew's Hospital and lecturer there on surgery conjointly with my friend, Mr. Bruce Clarke, I hold a position which was held by some of the most renowned surgeons in the annals of this Company of Barbers whose honoured guests we are this evening: Thomas Vicary, your first master, Clowes, Gale, Woodall, Charles Bernard, and Percivall Pott. I am not going to weary you with any long discourse on the historical aspects of surgery in relation to the barbers, but I should like to say at once that I believe we as surgeons owe our present position and the esteem in which we are held very largely to the action of the Barbers' Company in the remote past. I mean, of course, pure surgery, consulting and operating, such as is practised by the majority of my professional brethren who are here this evening. To prove this and to show how much we owe to the barbers we must consider shortly what we were, how we were helped, and what we became. For our purposes London may be taken to represent England, because what was true of London was equally true, so far as we know, of the larger and older towns in the provinces, Oxford, Bristol, Exeter, York, Newcastle, all had a few surgeons and after a time a barber surgeons guild. In London, then, from the beginning of civic history there were two groups of men, barbers who shaved, did minor operations and were general practitioners, and surgeons who undertook what we should now call pure surgery, though there is no doubt that they often meddled in physic, just as in many country towns to this day the surgeon to the county hospital will treat a case of pneumonia if he is summoned to attend it. But, broadly speaking, the barbers were tradesmen keeping shops; the surgeons, being the more expert, having a wider outlook, and often having a scientific mind, more nearly approached the standard of a profession. These pure surgeons were not very numerous and for the most part they attained their superior dexterity in the wars which were so numerous when England was only a small part of a large continental kingdom. The barbers were more numerous but the surgeons made up in influence what they lacked in numbers. Wounds and their prolonged treatment necessarily brought the surgeon into very intimate relationship with the great nobles who led our forces in wartime and you will remember that when armour was worn and tournaments were frequent it was the leaders who suffered much more than the common people. It often happened, therefore, in the rough and tumble of camp life that the nobleman became the personal friend of his surgeon, especially if the surgeon were a good fellow and had been successful in his cure, so that when peace came and they were all at home again the surgeon had a powerful friend at court who was able and willing to do him many a good turn. It thus happened that the surgeon was a person of influence at a time when many unconstitutional acts went by favour. The barbers, on the other hand, stayed at home, became good citizens, amassed fortunes for themselves, and in so doing became first-rate men of business. The surgeons necessarily had the defects of their good qualities. They led a roaming and joyous existence, intervals of hard work or disaster being mingled with periods of ease and the riot of plunder. In nothing is this better seen than in the question of fees. The barber worked steadily with the help of his apprentices, put the proceeds into the till, and ventured them in trade. The surgeon received his pay when he could get it. Nominally, in 1415, for instance, it was twelvepence a day, but he probably only got the money when the King or his leader happened to be in funds and as often as not it was in arrear and very often he never got it at all. He was paid in kind for personal services, sometimes, as we learn, an ambling horse and a diamond ring worth 30 crowns, at another time a tun of wine and more when finished, and at another time "an honest present." Very rarely do we meet with a surgeon who was capable of making a bargain. I only know of one, and he lived a generation after Richard the Barbour, whose memory we are assembled here this evening to honour. John of Ardern, who was a North-countryman living in London in 1360, says that for the cure of a fistula, "when it is curable, ask of a worthy man and a great an hundred marks or forty pound with robes and fees of an hundred shillings term of life by year. Of less men forty pounds or forty marks ask he without fees. And take he not less than an hundred shillings for never in all my life took I less than an hundred shillings for cure of that sickness." His business capacity is further shown in the advice which he gives about fees, for he says: "Ask boldly more or less, but ever beware of scarce asking, for overscarce asking setteth at nought both the market and the thing." But

there were very few surgeons like John of Ardern. When the wars lulled the surgeons felt the pinch of poverty and in 1423 they entered into an agreement with the physicians who practised in London to form a single profession. The union did not last long, for the wars began again and the surgeons hurried away to France. In the early Tudor period, when peace became more assured and the standard of living became higher, the surgeons again felt the stress of poverty and made overtures for a union with the barbers. The proposed union fell through, and it was not until 1540 that the Company of Barbers consented to join the fraternity of Surgeons to form the United Company of Barbers and Surgeons, the union being brought about, I believe, by a desire to check the enormous increase in quackery which marked the whole reign of Henry VIII., owing to the Acts of 1511, which successively transferred the licensing of barber surgeons in London to the Dean and Chapter of St. Paul's Cathedral and allowed anyone to practise. The union was advantageous to both parties. The surgeons obtained wholesome financial advice, the goodwill of very worthy citizens, and a local habitation, to say nothing of a lucrative connexion with a number of practitioners who often found it necessary to invoke the assistance of their friends amongst the surgeons. Thus sheltered and protected from the necessity of earning a precarious existence surgery grew and developed into the science which made such remarkable advances during the reign of Elizabeth. The barbers on their side gained in position and influence by the new alliance. They entered heartily into the proposals of the surgeons and acted very much the part that the lay board of a modern hospital does to the medical committee. Surgical education prospered under the sway of the United Company. Lectures were delivered and anatomy was taught by the best teachers of the time, usually by physicians who afterwards attained to eminence, whilst a high ethical standard was enforced by fine and imprisonment. The thoroughness with which surgery was taught is shown by the fact that there were two grades of surgeons in the Company, the one who had passed the ordinary examinations and a second who had taken a higher qualification known as "the Grand Diploma." I should very much like to trace the history of this Grand Diploma. It corresponded in some measure to the Serjeancy in law, to the M.A. at the universities under the old system, or to the Doctorate, and it is represented in modern times by the F.R.C.S. examination. The alliance of the barbers with the surgeons was thus mutually beneficial. But mark what happened as soon as the separation took place. The surgeons almost immediately showed their want of business capacity and proved that they had owed their corporate financial success to the barbers. Within 20 years the Surgeons' Company was bankrupt and discredited. The Master was able to say with truth in his celebrated philippic, "Your theatre is without lectures, your library room without books is converted into an office for your clerk, and your committee room is become his parlour." Without the help of the barbers it is very possible that we might have reached this degree of degradation early in the Stuart period instead of late in Hanoverian times. Now, again, the barbers have shown their old cordiality to us. By a graceful courtesy they have arranged that one of the most eminent members of our profession, who has filled most worthily the office of President of the Royal College of Surgeons of England, shall to-night occupy the Master's chair, and by inviting us here this evening it has enabled us to participate in an occasion which takes us back in memory to a very early time in our professional career. Without further words, therefore, I give you the toast of the evening, "The Worshipful Company of Barbers, root and branch, may it flourish for ever." I would couple with the toast the name of Mr. Sidney Young, the only begetter of this feast, as true a friend of the Company as he is to all who know him and the most distinguished historian of this aspect of our profession. To him we wish continued health, prosperity, and a long life.

The toast was responded to by Mr. SIDNEY YOUNG, Past Master of the Barbers' Company.

The toast of "The Visitors" was proposed by Mr. RICHARD ROBERTS, Past Master of the Barbers' Company, and was responded to by the Bishop of OXFORD (a son of Sir James Paget) and Sir ROBERT BALL.

Sir FREDERICK TREVES proposed "The Health of the Master," dwelling upon the learning and powers of work which he was known to possess, after responding to which Sir JOHN TWEEDY proposed the health of "The Worshipful Company of Grocers" in whose hall the banquet was taking place. The proceedings closed with a few words of reply from Mr. F. A. ROBERTS, Master of the Grocers' Company.

Between the speeches an excellent musical programme was provided by Mr. Tom Clare.

THE FOURTH INTERNATIONAL CONGRESS OF ELECTROLOGY AND RADIOLOGY AT AMSTERDAM.

THIS Congress is held once in three years and is of importance from the fact that not only is nearly every country where the sciences are cultivated well represented, but those who attend make it almost a point of honour to put forth their very best efforts to make the scientific side of the Congress a conspicuous success. That held this year in Amsterdam on Sept. 1st to 5th was no exception to this rule and indeed, under the inspiring influence of the President, Professor J. K. A. WERTHEIM SALOMONSON, it could not very well be otherwise. His own contributions to the proceedings were as extensive as they were important and gave evidence of an enormous amount of painstaking research.

In his opening address the PRESIDENT first expressed his indebtedness to the burgomaster of Amsterdam for his kind encouragement and assistance and also to the university authorities who placed their buildings, rooms, &c., at the disposal of the Congress. He reminded his hearers of the important work done by Dutch men of science for electrical progress—from the "Leyden Jar of Musschenbrock" of Leyden in 1746, of the experiments bearing on the transformation of electricity into heat by Marum in 1785, and right down to the quartz-fibre galvanometer of Einthoven, an instrument of such marvellous sensitiveness and accuracy that it has opened up new avenues of experimental research the existence of which was never before suspected.

In giving a *résumé* of the scientific proceedings it will be best to take the papers in groups relating to each particular branch of the work of the Congress, and we cannot do better than lead off with those bearing on the oldest branches,

Electro-Diagnosis and Electro-therapeutics.

Professor BORUTTAU (Berlin) in his paper on the Current of Action showed how the presence of electrical currents in normal muscle in action could be detected by the electrodes at the sides and ends of the muscle and joining them up to the Einthoven galvanometer above referred to. His paper also dealt with the histological and chemical changes, which were of considerable interest.

The PRESIDENT read a paper on somewhat similar lines—the Currents of Action in Reflex Contraction and Muscular Clonus in the Human Subject. He obtained his currents in practically the same way but used the quadriceps and excited it by means of the patellar reflex. In this way he avoided the confusion that was sure to arise when using an outside current and an instrument so sensitive as Einthoven's galvanometer. The current so obtained was quite free from such disturbance and he had found the method useful in investigating obscure cases of nervous disease.

Dr. HOORIVEG, in dealing with the Law of Excitation of Muscles and Nerves, produced an elaborate discourse all tending to disprove the law of Dubois Reymond.

Dr. CLUZET (Toulouse) made an appeal in his paper for a unification of measurements and methods in electro-diagnosis, a matter upon the desirability of which all are agreed, but it was also agreed that to bring it into practical shape would be attended with no small amount of difficulty.

The PRESIDENT in another paper on the Coefficient of Muscular Contraction and the Coefficient of Polarity drew attention to the fact that there existed a constant relation between the current just sufficiently intense to produce a kathodal closing contracture and an intensity just causing tetanus—this was the coefficient of contraction. The relation between the least current to produce a kathodal

closing contracture and an anodal closing contracture was the coefficient of polarity. Under pathological conditions these coefficients were disturbed, but with a return to health the relationship was restored. These were very clearly explained and demonstrated and should prove of great value in diagnosis and prognosis.

Dr. VERAJUTH (Zürich) read a paper on Psycho-galvanic Reflex Phenomena. By means of an electrode in each hand and a Deprez galvanometer in shunt any psychical excitation caused a deviation, but for demonstration purposes it was advisable to pass a mild constant current from hand to hand, when instead of a deviation there was an alteration of the existing deflection. He attributed this change in resistance to the sweat glands which were readily influenced by psychic emotion.

Dr. DUYVENSZ (Amsterdam) demonstrated his method of examination of teeth by means of a faradic sledge coil. One electrode was held by the patient, and the coil being set in action the other electrode, of specially convenient form, was applied to the suspected tooth. The secondary was then pushed over the primary until the first suspicions of pain were experienced by the patient. The position of the secondary was noted and a similar examination was made of the corresponding tooth of the opposite side. In this manner the most accurate examination could be made and the method was applicable to other parts of the body.

It was not until he had got fairly under way with his paper on the Electric Resistance of the Human Body that the Congress discovered that Professor LEDUC (Nantes) had a surprise in store for them. After relating the difficulties in ascertaining this and the great discrepancy in the results obtained, which were supposed to be due to polarisation at the electrodes, he first by some simple experiments proved how little influence moisture, anæmia, congestion, or temperature had on the resistance of the skin. He then went on to show that the only really effective part of a flat electrode was its circumference, and it was this and not the surface area which determined the resistance between any two points. That is to say, that for all the use that the central part of such an electrode was it might as well be removed, leaving a ring or hollow square or parallelogram. By means of lantern slides coated with gelatin and potassium ferrocyanide and iron electrodes he demonstrated exactly what took place with ring and plate electrodes, the change of colour showing this very clearly. Underneath the plate electrodes there was practically no change in colour and the changes in resistance were inversely as the circumference of the electrodes.

Later, after papers by Dr. ZANIETOWSKY on Electric Baths and Iono-therapy, in which it was shown that baths were not suited for the introduction of ions into the body, Professor LEDUC had a splendid opportunity of driving home his contention that the periphery is the only active part of an electrode and that in a bath it is only at the surface of the water that any appreciable amount of current enters the body. This will be all the more easily believed by anyone who has had a galvanic bath since the characteristic pricking sensation of the constant current is only felt, or most strongly felt, where the surface of the liquid touches the skin. Altogether it looks as if it would be necessary to modify many of our methods considerably if we are to get the best obtainable results in electro-therapy.

Dr. SIRERA SALSE (Barcelona) read a paper on Electro-therapy in the Treatment of Traumatism and demonstrated its value by giving an account of a series of control experiments on rabbits with microscopic examination.

Dr. BELLEMANIÈRE showed and explained the use of a special extensible electrode which he uses for the treatment of urethral stricture.

High-Frequency Currents.

Dr. DE NOBELE (Gaud) gave a discourse on the action of fulguration on tissues. In this the intense shower of sparks from the resonator of a very powerful high-frequency apparatus is directed on to the growth by means of a special electrode, in which carbonic acid gas from a cylinder is used to cool the spark and to prevent actual burning. He considers that malignant growths should be first removed as far as possible by the surgeon and fulguration applied very thoroughly to the base of the wound. In the course of the paper he produced evidence of the histological changes and the depth of action as well as the influence of the cooled electrode and the process of cicatrisation.

Dr. LIBOTTI (Brussels) gave evidence of the good effect of high-frequency currents in arterio-sclerosis.

Probably the most interesting paper on this subject was by Dr. BAUDEL on the Treatment of Neuritis by High Frequency and a very lively discussion followed, in which Dr. MOUTIER, Dr. ZANIETOWSKY, Dr. STEPANOF, and Dr. NOBELE took part.

Radio-diagnosis.

In this branch it is pleasing to note that though no one from this country took part our cousins, the Americans, were easily first as regards improvement in methods and general technique.

Dr. LESTER LEONARD (Philadelphia) gave an address on the Value of Practically Instantaneous Exposures in the Diagnosis of Disease in the Thorax and Abdomen. For this work he has a special new apparatus, invented by Snook of Philadelphia, which enables him to pass as much as 60 milliampères through the x ray tube. By this he has reduced the time of the normal exposure for the abdomen to about one-fifth of a second. In some of his radiographs the peristaltic waves of the stomach and intestine were very clearly shown. His thoracic plates were very rich in detail, showing the presence of, among other things, enlarged bronchial glands, which could not possibly be detected by any other means.

A very excellent series of skiagrams was also shown by Dr. HULST (Michigan). He has had constructed a huge static machine consisting of some 50 large plates arranged on a vertical shaft and driven by an electric motor, the two shafts being directly connected. This gives him a practically continuous current in contradistinction to the apparatus of Dr. Lester Leonard which gives a uni-directional pulsating current. Both these workers have eliminated inverse discharge from their circuits, which is an untold advantage. Dr. Hulst can get a good radiograph of the abdomen in one second, but he prefers to use a softer tube and gives a five-second exposure—a greater wealth of detail being obtained in this way.

The work of Professor WENCKEBACH (Groningen) deserves special mention. He is a strong believer in the stereoscopic method in that it gives real perspective and plasticity. Wenckebach is of the opinion that every consulting physician should train himself in x ray work as the time has now come when this can be no longer delayed. Also that the stereoscopic method shows much more detail and the true relationship of the various parts and is practically the only one that can be used for demonstration and the instruction of students. He had on view a whole room-full of most excellent stereo-radiographs. They were made on extra large plates and beautifully illuminated, so that with one of the several reflecting stereoscopes provided the series could be examined with a maximum of convenience and pleasure.

Papers on the Diagnosis of Renal Calculus were read by Dr. VAN DER GOOT (Gravenage) and Dr. HAENISCH (Hamburg). Short exposures, soft tubes, and large currents seem to be the methods now finding most favour.

The radiography of the vertebral column came in for much attention. A paper by Dr. GOCHT (Halle) had reference to the value of radiography in the diagnosis of spondylitis tuberculosa, in which the clinical symptoms give so little evidence of the extent of the mischief.

Dr. CONRAD (Antwerp) pleaded for more care in the examination of plates made of the lumbo-sacral region after accidents and gave instances where mere casual examination had failed to detect the presence of injury to the bones.

Dr. BERTOLOTTI (Turin) advocated sagittal skiagraphy of the cervical vertebræ when the question of caries arose. He showed the atrophy of bone and enlargement of the intervertebral foramen in such cases which were due to atrophy of the articular processes.

Professor BÉCLÈRE demonstrated the importance of examining the cupola of the diaphragm in disease of the liver, and Dr. KOHLER (Wiesbaden) described the method of radiographing the lower border of the liver, which at times gives useful information. He places the tube above with the anticathode at the level of the sixth dorsal vertebra, which brings out the border very sharply.

Dr. KIENBOCK (Vienna), as a result of some observations, was led to examine the heart in several cases after severe exertion. Instead of finding some dilatation he found a degree of temporary contraction. This was the more noticeable in the case of swimmers. His explanation is that of increased intra-thoracic pressure preventing the flow of venous blood to the heart.

Dr. HALLS DALLY (London) explained in his paper—which in his absence was read by Dr. REGINALD MORTON (London)—the great accuracy with which it was possible to measure the various respiratory movements by the aid of the orthodiagraph.

Dr. HENRARDE (Brussels) explained his method of extracting foreign bodies from the œsophagus with the aid of the fluorescent screen.

Radiotherapy.

Almost the first thing thought of when this subject is mentioned is that of x-ray measurement, and the uppermost thought in the minds of many was one of questioning as to the probability of some satisfactory method being forthcoming. Now that it is all over it must be confessed that we are very much where we were. At the same time we did not come altogether empty away as further experience has shown that some of the earliest methods are quite capable of giving very even results in actual practice.

Dr. HARET read the first paper on this subject in which he advocated the use of the Sabouraud pastille.

This brought the PRESIDENT to his feet who spoke against the method in the strongest terms. The fact that it was entirely inaccurate and untrustworthy in a moist climate such as that of Amsterdam was sufficient to prove its unsuitability for any accurate work. His method was to measure the quantity of energy put into the focus tube. In any given x ray outfit this would be determined by the voltage and ampèrage in the primary and the equivalent spark-gap in the secondary. By keeping all these constant he found that he could rely with confidence on obtaining the same dose.

Professor OUDIN agreed with the President and thought that the only variable factors should be distance and time.

Mr. KLINGELFUSS (Switzerland) also found that the measurement of the primary energy was sufficient and in his hands had given results that were quite satisfactory. Each worker had of course to determine the factors for his own apparatus by experience.

Professor BÉCLÈRE apparently uses most, if not all, of the methods at the same time but he admitted that he could not do without the measurement of the primary energy and the time. He thought that the criticisms on the Sabouraud pastille had been unnecessarily severe.

Dr. LURASCHI (Italy) thought the solution of the problem would be found to lie in the use of the selenium cell the resistance of which changed under the influence of x rays. It may be pointed out, however, that there is no evidence to show that this property runs parallel to that of producing histological changes in living tissues.

Dr. DEANE BUTCHER (London) gave his experience in the Use of Radium for Treatment. He is the fortunate possessor of a very excellent specimen which is no doubt a powerful factor in the results attained. He dwelt specially on its analgesic and antipruritic properties which he thought were due to the decomposition of lecithin in the nerve fibres. He had found it useful in lupus, epithelioma, and primary syphilitic chancre.

Dr. HAUCAMPS (Brussels) also had good results with radium in epithelioma and the resulting scar was always very satisfactory as regards softness and elasticity.

Dr. VAN DER GOOT and Professor SCHIFF both related their experiences with x rays in cutaneous diseases, including epithelioma, and showed photographs of successful cases.

Mr. DESSAUER described his method of treating deep-seated malignant disease. To get more even irradiation of the deeper structure he removed the tube some distance from the patient and made up for the loss in power by having six or more tubes at work at the same time and a long exposure. Further experience was necessary to test the value of the idea.

With regard to the exhibition the radiographs of Dr. Leonard, Dr. Hulst, and Professor Wenckebach mark a very great advance in radio-diagnosis. To anyone who has not kept in touch with the latest progress they would come as a perfect revelation. The same also applies to the lantern slides, &c., shown by the President of muscle currents, &c. Apart from the extensive exhibit he gave to the Congress a demonstration in his own laboratory of the way in which these were prepared. Among x ray tubes the most noteworthy was the regenerating tube of Bauer. This was effected on the principle that a certain kind of porcelain was pervious to air but not to mercury. Normally the porcelain disc mounted in the tube was covered with mercury, but when the latter was temporarily displaced a minute quantity of air percolated through the disc and so lowered the vacuum of the tube. Among apparatus those of Snook, Schall, and Grisson should be mentioned. They all aimed at the same thing—viz., to produce a uni-directional current for x ray work and so to eliminate the inverse discharge which was such a bugbear to coil users. All of these achieved the same end, each in its own way, but the Snook apparatus was the most powerful and could pass the largest currents through the x ray tube. The whole arrangements, social and scientific, reflect the greatest credit on the President and the committee. The next Congress in 1910 is to be held in Barcelona.

MEDICINE AND THE LAW.

The Case of Elizabeth Whitaker.

THE manner in which an inquest was held recently at Cowling, near Keighley, in the West Riding of Yorkshire, by the district coroner, Mr. Edgar Wood, led to an application being made in the King's Bench Division that the inquisition should be quashed and a fresh inquest held. The deceased was the daughter of a small farmer who with his family occupied two farmhouses situated about half a mile apart. The father and mother with four daughters and a son lived at Park Farm, and the deceased, who was 23 years of age, lived with two brothers of the respective ages of 20 and 11 years at Lumb Farm. On the evening of Nov. 11th the deceased was in the farm kitchen with her two brothers until they went upstairs to bed and on the morning of Nov. 12th her dead body, naked except for her stockings and clogs, was found in a partially charred condition with fragments of burnt clothing lying near it in an empty pigsty about 60 yards from the door of the farmhouse. The nature of the inquest, which the coroner held and concluded on the afternoon of the same day at Lumb Farm, may be judged from the statement of counsel in the Divisional Court that two witnesses only were called, no post-mortem examination was made and no medical evidence was adduced, at least four persons who helped to lay out the body were not called, nor were three others who were acquainted with the habits and movements of the deceased. Another exceptional feature of the case was the destruction before the inquest of nearly all the remains of clothing found near the body. This was done by some of the neighbours, including a man named Nelson, who was the tenant of a farm close by. It was carried out after the arrival and departure of a policeman who might reasonably have been expected to take steps to prevent such acts. The jury, on such materials as were laid before them on the afternoon following the death, delivered a verdict that the deceased was found burned to death (a finding based on no evidence) and added that the evidence was insufficient to show how the fire had originated. It was to be expected in the circumstances that suspicion would arise and that uneasiness would prevail in the neighbourhood as to a tragic occurrence the proved features of which were consistent with the commission of a brutal crime. The inadequate nature of the inquiry held by the coroner soon became apparent and attracted attention beyond that of the rustic inhabitants of the district and of their clergyman who was emphatic in the expression of his opinion from the pulpit. It therefore became the duty of the chief constable of the West Riding to move in the High Court that the inquisition should be brought up and quashed and an order made for the holding of a fresh inquest. This was done successfully after the papers had been laid before the Attorney-General and his fiat obtained. The second inquest was held in the Liberal Club at Cowling by the same coroner and jury and a considerable amount of evidence was heard, including that of three medical men, Dr. H. J. Campbell, Dr. J. G. Moffatt, and Mr. A. G. Hebblethwaite, who had made a post-mortem examination of the exhumed body. These gentlemen proved that the body of the dead girl afforded no evidence either of outrage or of any violent or criminal act conducing to her death, thus setting at rest rumours which the absence of medical evidence at the first inquest had allowed to circulate unchecked. Dr. Campbell described the wounds caused by the burning in detail. The charring involved practically the whole of the

head, two-thirds of the body, and the legs on both sides down to the knees. The state of her hands suggested that she had burned them in tearing off her clothing. The tongue was protruding and the condition of the lungs showed that death had been caused by suffocation in addition to the effect of the burns. There were no signs that the suffocation had been produced by external violence and the parts of the body burnt pointed to her clothing having caught fire when she was standing. There was no sign of outrage and nothing to suggest that any drug had been administered. The rest of the evidence in the case added very little to the jury's knowledge of the cause of the death of the deceased, as was shown by their verdict that she was suffocated or burned to death but that there was not sufficient evidence to say how she came by her burns. If, however, there was nothing either to point to foul play or to prove that an accident took place, there was enough to show that the mystery which still exists was one which demanded inquiry of the most complete nature possible. According to the evidence of the brothers at Lumb Farm, after they had gone to bed their sister did not follow their example but at some time or other in the night went out, locked the door, and pushed back the key under it, as she had done on previous occasions. This, if true, would negative the suggestion that she set herself accidentally alight in the house and ran out, or that she left it for a temporary purpose carrying a candle and matches, the former of which was found by a gate 44 yards from the house and the latter nine yards farther off in the pigsty close to the body of the deceased. There was a suggestion that paraffin had caused the rapid ignition of her clothing or of her hair on a night which, a witness said, was wet, misty, and windy, but although there was some evidence of her washing her hair occasionally with paraffin there was none that she had done so that evening and the paraffin lamp in the farmhouse had apparently not been lighted. There was no evidence that she was unhappy or that she had any particular male friend or any enemy, and her leaving the house for the night would not have been very unusual as sometimes she went over to Park Farm and slept there. There was evidence which pointed to the death having taken place soon after the brothers had gone to bed, as Nelson, the farmer mentioned above, and his daughter said in the witness-box that they had noticed a bright light in the direction of Lumb Farm when they went out to feed cattle before going to bed. Among the garments that the deceased was wearing a flannelette petticoat was mentioned. The balance of probability in view of the evidence given at the inquest points to an accident owing to the deceased going to an outhouse with a candle and matches, if the brothers were mistaken and if the key found by them had in fact fallen from a door closed but not locked. What actually took place must, however, almost necessarily remain a mystery, and the record of the subsequent proceedings occasioned by the futile first inquest will remain as a warning to coroners who endeavour to dispense with medical evidence. The proceedings which led to the second inquest were taken under Section 6 of the Coroner's Act 1887, which commences as follows:—

> Subsection (1). Where Her Majesty's High Court of Justice upon application made by or under the authority of the Attorney-General is satisfied either (*a*) That a coroner refuses or neglects to hold an inquest which ought to be held; or (*b*) where an inquest has been held by a coroner that by reason of fraud, rejection of evidence, irregularity of proceedings, insufficiency of inquiry or otherwise it is necessary or desirable, in the interests of justice, that another inquest should be held, the court may order an inquest to be held touching the said death, and may, if the court think it just, order the said coroner to pay such costs of, and incidental to, the application as to the court may seem just, and where an inquest has been already held may quash the inquisition on that inquest.

The two following subsections enable the court to order that a coroner other than the one against whom the application is made shall hold the inquest ordered and also directs that at such an inquest it shall not be necessary to view the body unless the court order otherwise. In the case under comment the court made no order as to costs, and the expense occasioned by two inquests instead of one and that of bringing about the holding of the second one will apparently have to be borne by the county in which the inquests took place. As county councils are sometimes stated to be responsible for a desire on the part of coroners to economise in the matter of the fees of medical witnesses, county councils as well as coroners may find the proceedings following the death of Elizabeth Whitaker instructive.

The Peculiar People and the Duties of Midwives.

An inquest was held recently at Canning Town on the body of Emily Sophia Ballard, a married woman and a member of the sect known as the Peculiar People, who was found upon the medical evidence to have died from puerperal septicæmia and peritonitis, a rider being added to the effect that the midwife should be dealt with under the Midwives Act. The coroner upon this directed the midwife not to practise until she heard from the central authority. Mrs. Ballard, who had borne other children before, was delivered on Nov. 22nd, being then under the care of a registered midwife. According to her husband's evidence, everything went well until Dec. 3rd when his wife became very ill and he seems to have offered her medical assistance which she absolutely refused. An elder of the sect was, however, called in and on the following Sunday, Dec. 6th, a prayer meeting was held on her behalf. On the next day, Dec. 7th, she died. The midwife gave evidence that she attended the deceased for six days only, and that if she had thought that her patient's condition demanded the intervention of a medical man she would have taken it upon herself to call one in. No doubt the local supervising authority will take notice of the jury's expressed opinion, but, whatever it or the Central Midwives Board may decide after full inquiry into the facts, a midwife attending a patient who is of the Peculiar People will not have much power to avert serious results when complications occur. The duty imposed on her under the Midwives Act when certain specified complications arise is to "decline to attend alone" and to "advise that a registered medical practitioner be sent for." In the case commented upon it will be seen that the midwife, if her statement was correct, ceased to attend the case some days before the husband noticed that his wife was "very ill." With regard to the responsibility of the near relatives of the deceased in a case of this kind, it is not easy, or indeed possible, to convict them of manslaughter of a person who, being of full age and in possession of her usual faculties, resolutely declines to have medical assistance. Even the recommendation made by the midwife and her refusal to continue in charge of a case can hardly affect the matter when the death of the mother only has been the result. If the advice to call in a medical man were due to conditions in the newly born child demanding his assistance, no doubt evidence of the warning given by the midwife would aggravate the charge against the parent or parents, but, as all know, the punishment usually inflicted upon members of this strange and unreasonable sect in our courts of law is not very heavy and does not seem to deter them or their brethren from similar conduct upon other occasions.

The Poisoning Case at Antrim.

At the Ulster Assizes the trial recently took place of a woman named Elizabeth Kirkwood Doherty who was indicted for the murder of her husband. The case was opened by the Solicitor-General for Ireland who told the jury that he would satisfy them that no human hand but that of the prisoner was laid upon an egg which contained the poison from the moment when it was broken into a pan until it reached the deceased who ate it for his supper. The husband had died on the following morning, and a daughter of the couple, aged three years, died a week later, having apparently had strychnine administered to her in milk. This second death had been followed by the exhumation of the body of the man and the charge against his wife. The suggestion made by counsel for the defence was that the poison had fallen through the rafters of the kitchen from a loft above and so got into the egg. The husband appears to have expressed before he died the opinion that this had been the case, and counsel, in addressing the jury, laid stress upon his having done so. Presumably the jury were impressed by the possibility of the unusual accident described having happened, for the prisoner was found "Not guilty" and was discharged.

THE MEDICAL INSPECTION OF SCHOOL CHILDREN IN SOMERSET.—At a meeting of the Somerset County Education Committee, held at Bridgwater last week, it was decided to appoint a full-time assistant medical inspector of schools who should have had a special training in ophthalmic work.

Looking Back.

FROM

THE LANCET, *SATURDAY*, Dec. 18th, 1830.

PRACTICAL RIGHTS OF PHYSICIANS AND APOTHECARIES.

To the Editor of THE LANCET.

SIR,—I have just received THE LANCET for the 20th, and therein I find that when speaking of the privileges of physicians, you seem to differ with Mr. Willcock, who maintains that they possessed the power to prepare medicines according to their own prescriptions prior to the passing of the Apothecaries' Act; and moreover, that these privileges were granted them in the "saving rights" of that act. Now there is one question which I hope you will answer in your next Number. Can a physician prepare his own medicines out of London, that is, any-where in the country? For you say yourself, "In a word, neither a fellow of the London College of Physicians, nor a graduate of the University of Edinburgh, can follow the business of an apothecary avowedly as an apothecary in *this town*." By your merely mentioning "this town," therefore, it would appear that they can exercise the art of an apothecary any-where but there.

I remain, Sir,
Your obedient servant,
AN EARNEST INQUIRER.*

*** Physicians did enjoy the right of preparing their own prescriptions before the Apothecaries' Act was passed, but that right was not preserved to them in the saving clause of the Act.—ED. L.

A physician cannot practise as an apothecary, either in or out of London, unless he be a licentiate of the Apothecaries' Company.—ED. L.

* "An *earnest* Inquirer!"—In our correspondent's extreme anxiety, he orgot to pay the postage of his letter, which amounted to one shilling and three-pence. It gives us pleasure, at all times, to afford to querists whatever information we may happen to possess respecting any subject on which they may be desirous of obtaining information, and in common fairness we ought to be excused from the payment of postage. The tax of postage, has of late become so exceedingly burdensome, that we have been compelled, in our own defence, to resolve that no letters in future shall be taken from the postman, unless they are postage free. The amount of postage in one week for *unpaid* letters, has exceeded thirty shillings.—ED. L.

With reference to the then Editor's rebuke to the "Earnest Inquirer" which now (in December, 1908) forms an interesting historical note, we may say that "The British Almanac" for the year 1829 set out the rates of postage for letters then in force. In England, if single, they ranged from "not exceeding 15 miles 4*d.*" to "above 300 miles but not exceeding 400, 13*d.*," and above that, for every 100 miles or part thereof, 1*d.* more. The average, however, was about 7*d.* each, exclusive of Members of Parliament who might frank 10 and receive 15 daily. Packets of 1 ounce weight were charged as four single letters. The smallest sheet, if cut in two, was charged double postage. Letters between England and Ireland paid, over and above the common rates, a "packet postage" of 3*d.*, 4*d.*, or 5*d.*, and, if an ounce weight, 9*d.* There was a 2*d.* postage in London, however, for letters going from one part of the town to another (1*d.* in some other towns) and each letter was allowed to weigh not more than 4 ounces. Mr. Rowland Hill's scheme for a penny postage throughout the United Kingdom did not come into operation until Jan. 10th, 1840, every letter at that rate then having to be below half an ounce in weight. It is recorded by one annalist, apparently with pride, that on that day "no less than seven-eights were prepaid."

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 7639 births and 4834 deaths were registered during the week ending Dec. 12th. The annual rate of mortality in these towns, which had been equal to 15·6 per 1000 in each of the three preceding weeks, declined to 15·5 in the week under notice. During the first eleven weeks of the current quarter the annual death-rate in these towns averaged 14·8 per 1000, and in London the mean rate during the same period did not exceed 14·1. The lowest annual death-rates in these towns last week were 5·6 in Hornsey, 7·5 in Barrow-in-Furness, 8·3 in Wallasey, and 9·1 in Leyton; the rates in the other towns ranged upwards, however, to 23·3 in Wigan, 23·5 in Rochdale and in Stockton-on-Tees, 23·7 in Rotherham and in Middlesbrough, and 26·0 in Oldham. In London the death-rate last week did not exceed 14·3 per 1000. The 4834 deaths from all causes in the 76 towns showed a decline of 29 from the low numbers in recent weeks, and included 412 which were referred to the principal epidemic diseases, and exceeded by 44 the low number in the previous week; of these 412 deaths, 182 resulted from measles, 76 from diphtheria, 48 from diarrhœa, 38 from scarlet fever, 37 from whooping-cough, and 31 from "fever" (principally enteric), and not one from small-pox. The deaths referred to these epidemic diseases during the week were equal to an annual rate of 1·3 per 1000, against 1·3 and 1·2 in the two preceding weeks; in London the rate from these diseases did not exceed 1·1 per 1000. No death from any of these epidemic diseases was registered last week in Bolton, Birkenhead, Tottenham, Leyton, or in eight other smaller towns; the annual death-rate therefrom, however, ranged upwards in the other towns to 3·3 in Oldham and in Huddersfield, 4·3 in Leicester, 4·4 in Bury, and 5·1 in Middlesbrough. The 182 fatal cases of measles during last week in the 76 towns showed a further increase of 40 upon the steadily increasing numbers in recent weeks and considerably exceeded the number returned in any previous week of this year; they caused annual death-rates equal to 2·8 in Huddersfield, 2·9 in Grimsby, 3·5 in Bury, 4·3 in Leicester, and 6·5 in Middlesbrough. The 76 deaths from diphtheria also showed a further increase upon recent weekly numbers, and were proportionally most numerous in Salford, Swansea, York, Rhondda, King's Norton, and West Ham; nine fatal cases also occurred in Liverpool and six in Manchester. The deaths attributed to diarrhœa, showed a further marked decline, and were fewer than in any week since the middle of May last. The 38 fatal cases of scarlet fever corresponded with the number returned in the previous week; the highest rates from this disease during the week were 1·2 in Blackburn and 1·5 in Handsworth. The 37 deaths from whooping-cough showed some increase, but were again below the average; the three in Wolverhampton were, however, equal to an annual rate of 1·5 per 1000. The 31 deaths referred to "fever" were fewer than the number in any recent week; the three in Wigan were, however, equal to an annual death-rate of 1·7 per 1000. The number of scarlet fever patients under treatment in the Metropolitan Asylums and the London Fever Hospitals, which had been 3831 and 3747 on the two preceding Saturdays, had further declined to 3704 on Dec. 12th; the new cases of this disease admitted to these hospitals during the week under notice were 426, against 495 and 406 in the two preceding weeks. The deaths in London referred to pneumonia and other diseases of the respiratory organs, which had been 334, 318, and 295 in the three preceding weeks, further declined during last week to 284, and were 125 below the corrected average number in the corresponding week of the five years 1903–07. The causes of 52, or 1·1 per cent., of the deaths registered in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death during the week were again duly certified in London, Leeds, Bristol, West Ham, Bradford, Newcastle-on-Tyne, Hull, and in 47 other towns; the 52 uncertified causes of death in the 76 towns included, however, 10 in Liverpool, nine in Birmingham, six in Sheffield, and five in Gateshead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 17·3 16·4, and 16·5 in the three preceding weeks, declined to 15·2 in the week ending Dec. 12th. During the first eleven weeks of the current quarter the annual death-rate in these eight towns averaged 15·1 per 1000, and exceeded by 0·3 the mean rate during the same period in the 76 English towns. Among the eight Scotch towns the death-rate during the week under notice ranged from 5·8 and 8·0 per 1000 in

Paisley and Leith, to 16·7 in Greenock and 19·5 in Dundee. The 536 deaths in the eight towns showed a decline of 47 from the number returned in the previous week, and included 50 which were referred to the principal epidemic diseases, against numbers declining from 68 to 53 in the four preceding weeks; of these 50 deaths, 19 resulted from whooping-cough, 15 from diarrhœa, seven from diphtheria, six from scarlet fever, and three from "fever," but not one either from measles or small-pox. These 50 deaths were equal to an annual rate of 1·4 per 1000, exceeding by 0·1 the mean rate during the week from the same diseases in the 76 English towns. The 19 fatal cases of whooping-cough in the eight Scotch towns showed a further increase upon the numbers returned in recent weeks, and included 12 in Glasgow and three both in Dundee and Aberdeen. The deaths attributed to diarrhœa, which had been 25 and 18 in the two preceding weeks, further declined last week to 15, and were fewer than in any week since the beginning of July; 12 occurred in Glasgow and two in Dundee. Of the seven fatal cases of diphtheria five were returned in Glasgow and two in Dundee. The six deaths from scarlet fever, including three in Glasgow, corresponded with the number in the previous week. The three deaths referred to "fever" occurred in Glasgow; two were certified as cerebro-spinal fever and one as enteric. The deaths referred to diseases of the respiratory organs in the eight towns, which had been 136, 133, and 113 in the three preceding weeks, rose again to 115 in the week under notice, but were 47 below the number returned in these towns in the corresponding week of last year. The causes of 13, or 2·4 per cent., of the deaths registered during the week in the eight towns were not certified; in the 76 English towns during the same week the proportion of uncertified causes of death did not exceed 1·1 per cent.

HEALTH OF DUBLIN.

The annual rate of mortality in Dublin, which had been equal to 24·2, 22·2, and 23·8 per 1000 in the three preceding weeks, declined to 21·9 in the week ending Dec. 12th. During the first eleven weeks of the current quarter the death-rate in the city averaged 21·2 per 1000, whereas the mean rate during the same period did not exceed 14·1 in London and 13·9 in Edinburgh. The 166 deaths of Dublin residents during the week under notice showed a decline of 14 from the number returned in the previous week, and included 13 which were referred to the principal epidemic diseases, against 11 and 12 in the two preceding weeks. These 13 deaths were equal to an annual rate of 1·7 per 1000; the rate from these diseases in the same week did not exceed 1·1 in London and 0·3 in Edinburgh. Of the 13 deaths from these epidemic diseases in Dublin last week, seven resulted from measles, three from whooping-cough, and one each from diphtheria, "fever," and diarrhœa, but not one either from scarlet fever or small-pox. The seven fatal cases of measles showed a further increase upon recent weekly numbers, and the three of whooping-cough also showed an increase. The 166 deaths from all causes during the week included 34 of infants under one year of age and 47 of persons aged upwards of 60 years; both these numbers were below those returned in the previous week. Two inquest cases and two deaths from violence were registered during the week, and 67, or 40·4 per cent., of the deaths occurred in public institutions. The causes of four, or 2·4 per cent., of the deaths in Dublin last week were not certified; the proportion of uncertified causes of death in Edinburgh last week was equal to 1·9 per cent., while in London the causes of all the 1311 deaths were duly certified.

VITAL STATISTICS OF LONDON DURING NOVEMBER, 1908.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious diseases, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 9·2 per 1000 of the population, estimated at 4,795,757 persons in the middle of the year; in the three preceding months the rates were 6·3, 8·6, and 9·2 per 1000 respectively. The lowest rates last month were recorded in Kensington, Hammersmith, St. Marylebone, Hampstead, the City of London, and Lambeth; and the highest rates in Holborn, Shoreditch, Bethnal Green, Stepney, Poplar, and Battersea. The prevalence of scarlet fever showed a slight decline from that recorded in either of the two preceding months; this disease was proportionally most prevalent in the City of Westminster, Stoke Newington, Hackney, Shoreditch, Bethnal Green, Poplar, and Battersea. The Metropolitan Asylums Hospitals contained 3787 scarlet fever patients at the end of last month, against 2807, 3431, and 3776 at the end of the three preceding months; the weekly admissions averaged 477, against 365, 506, and 493 in the three preceding months. Diphtheria was more prevalent during November than in any preceding month of this year; among the various metropolitan boroughs the greatest proportional prevalence was recorded in Fulham, Shoreditch, Stepney, Battersea, Lewisham, and Woolwich. The number of diphtheria patients remaining under treatment in the Metropolitan Asylums Hospitals at the end of last month was 1228, against 843, 953, and 1118 at the end of the three preceding months; the weekly admissions averaged 158, against 110, 128, and 158 in the three preceding months. Enteric fever, which had shown a continuously increasing prevalence in each month since June, was again considerably in excess last month; this disease was proportionally most prevalent in Holborn, Finsbury, Shoreditch, Bethnal Green, and Bermondsey. There were 184 enteric fever patients under treatment in the metropolitan asylums hospitals at the end of last month, against 69, 95, and 145 at the end of the three preceding months; the weekly admissions averaged 29, against 12, 18, and 24 in the three preceding months. The 18 cases of puerperal fever notified during the month included three which belonged to Southwark and two each to Kensington, Fulham, and Lambeth. Of the six cases notified as cerebro-spinal meningitis three belonged to Wandsworth, and one each to Islington, Stepney, and Lambeth.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various boroughs, the deaths occurring in institutions having been distributed among the several boroughs in which the deceased persons had previously resided. During the four weeks ending Nov. 28th the deaths of 5365 persons belonging to London were registered, equal to an annual rate of 14·6 per 1000; in the three preceding months the rates had been 12·9, 12·8, and 12·3 per 1000. Among the several boroughs the death-rates last month ranged from 7·2 in Hampstead, 11·3 in Woolwich, 11·6 in Battersea, 11·8 in Stoke Newington, 11·9 in Greenwich, and 12·1 in Wandsworth, to 17·5 in Holborn and in Stepney, 18·2 in Shoreditch, 18·8 in Southwark, 19·3 in Bermondsey, 20·9 in Finsbury, and 21·7 in the City of London. The 5365 deaths from all causes included 457 which were referred to the principal epidemic diseases; of these, 123 resulted from measles, 38 from scarlet fever, 82 from diphtheria, 31 from whooping-cough, 39 from enteric fever, and 144 from diarrhœa, but not any from small-pox, from typhus, or from ill-defined pyrexia. No death from any of these diseases was recorded last month in the City of London; among the metropolitan boroughs they caused the lowest death-rates in Hampstead, Stoke Newington, Wandsworth, and Camberwell; and the highest rates in Holborn, Finsbury, Bethnal Green, Stepney, Bermondsey, and Lewisham. The 123 deaths from measles were equal to the average number in the corresponding period of the five preceding years; the greatest proportional mortality from this disease was recorded in Chelsea, St. Marylebone, Finsbury, Bethnal Green, Stepney, Bermondsey, and Lewisham. The 38 fatal cases of scarlet fever were slightly fewer than the corrected average number; this disease was proportionally most fatal in Paddington, Hackney, Shoreditch, Bethnal Green, Stepney, and Woolwich. The 82 deaths from diphtheria were 19 in excess of the average number in the corresponding weeks of the five preceding years; the highest death-rates from this disease last month were recorded in Fulham, Stepney, Poplar, Southwark, Lambeth, Lewisham, and Woolwich. The 31 fatal cases of whooping-cough were 24 fewer than the corrected average number; this disease was proportionally most fatal in Paddington, Fulham, Islington, Shoreditch, Bethnal Green, Stepney, and Woolwich.

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING NOVEMBER, 1908.

(Specially compiled for THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1908.	NOTIFIED CASES OF INFECTIOUS DISEASE.										DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.										Deaths from all causes.	Death-rate per 1000 living.	Deaths of Infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cerebro-spinal meningitis.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.*	Diphtheria.*	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.	
LONDON	4,795,757	—	2013	762	—	209	—	18	384	6	3382	9·2	—	123	38	82	31	—	30	—	144	457	1·2	5365	14·6	128
West Districts.																										
Paddington	150,923	—	76	10	—	8	—	—	12	—	106	9·2	—	3	2	—	4	—	—	—	5	14	1·2	155	13·4	119
Kensington	182,752	—	46	21	—	9	—	2	11	—	89	6·3	—	2	2	3	1	—	—	—	1	11	0·8	188	13·4	110
Hammersmith	124,012	—	27	13	—	1	—	—	7	—	48	5·0	—	—	1	—	1	—	1	—	4	7	0·7	138	14·5	128
Fulham	171,562	—	50	40	—	4	—	2	9	—	105	8·0	—	—	1	4	2	—	—	—	6	13	1·0	168	12·8	115
Chelsea	75,049	—	20	14	—	2	—	1	8	—	45	7·8	—	3	—	1	—	—	2	—	3	9	1·6	92	16·0	135
City of Westminster	170,545	—	98	17	—	3	—	—	5	—	123	9·4	—	4	—	3	—	—	—	—	3	10	0·8	182	13·9	141
North Districts.																										
St. Marylebone	126,867	—	21	11	—	6	—	1	14	—	53	5·4	—	5	—	1	—	—	—	—	4	10	1·0	147	16·1	72
Hampstead	92,654	—	28	5	—	2	—	—	3	—	38	5·3	—	—	—	—	—	—	—	—	1	1	0·1	61	7·2	61
St. Pancras	237,075	—	74	32	—	9	—	1	15	—	131	7·2	—	6	1	3	2	—	1	—	5	17	0·9	227	15·8	144
Islington	349,091	—	123	46	—	18	—	1	17	1	211	7·9	—	8	3	7	4	—	5	—	8	35	1·3	397	14·8	129
Stoke Newington	54,015	—	31	3	—	3	—	—	3	—	40	9·7	—	—	1	—	—	—	—	—	—	1	0·2	49	11·8	98
Hackney	235,253	—	128	25	—	8	—	1	20	—	182	10·1	—	3	4	1	2	—	2	—	4	16	0·9	247	13·7	124
Central Districts.																										
Holborn	54,466	—	27	7	—	9	—	—	6	—	49	11·7	—	2	1	—	—	—	3	—	4	10	2·4	73	17·5	76
Finsbury	96,007	—	38	18	—	7	—	—	8	—	71	9·6	—	5	—	2	—	—	2	—	6	15	2·0	154	20·9	166
City of London	19,252	—	6	2	—	—	—	—	—	—	8	5·4	—	—	—	—	—	—	—	—	—	—	—	32	21·7	200
East Districts.																										
Shoreditch	115,227	—	78	22	—	12	—	—	17	—	129	14·6	—	2	5	2	2	—	—	—	4	15	1·7	161	18·2	125
Bethnal Green	131,066	—	73	18	—	15	—	—	25	—	131	13·0	—	13	3	—	2	—	4	—	2	24	2·4	163	16·2	96
Stepney	310,706	—	176	60	—	11	—	—	33	1	281	11·8	—	25	4	11	6	—	5	—	13	64	2·7	417	17·5	137
Poplar	171,516	—	106	19	—	8	—	1	26	—	160	12·2	—	3	2	4	—	—	1	—	8	18	1·4	208	15·8	120
South Districts.																										
Southwark	210,442	—	79	23	—	9	—	3	16	—	130	8·1	—	6	1	5	—	—	2	—	11	25	1·5	303	18·8	174
Bermondsey	127,910	—	53	22	—	12	—	1	13	—	101	10·3	—	13	1	2	—	—	3	—	8	27	2·8	189	19·3	179
Lambeth	321,344	—	97	39	—	12	—	2	16	1	167	6·8	—	5	2	12	—	—	1	—	6	26	1·1	349	14·2	108
Battersea	183,873	—	139	52	—	8	—	—	10	—	209	14·8	—	3	—	1	1	—	—	—	6	10	0·7	164	11·6	125
Wandsworth	289,506	—	133	44	—	7	—	1	19	3	207	9·3	—	3	—	4	2	—	1	—	3	13	0·6	268	12·1	112
Camberwell	290,022	—	91	52	—	4	—	1	24	—	172	8·0	—	1	—	5	—	—	1	—	5	12	0·6	291	13·5	145
Deptford	117,539	—	61	16	—	5	—	—	15	—	97	10·8	—	—	1	—	—	—	2	—	9	12	1·3	129	14·3	193
Greenwich	109,110	—	35	16	—	6	—	—	12	—	69	8·2	—	1	1	—	—	—	1	—	5	8	1·0	100	11·9	111
Lewisham	156,627	—	41	74	—	8	—	—	11	—	131	10·9	—	8	—	—	6	—	—	—	10	24	2·0	149	12·4	154
Woolwich	131,346	—	53	31	—	3	—	—	11	—	98	9·7	—	—	2	5	2	—	—	—	1	10	1·0	114	11·3	61
Port of London	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup.

The 39 deaths referred to enteric fever showed a slight decline from the average number in the corresponding period of the five preceding years; the highest death-rates from this disease last month were recorded in Chelsea, Islington, Holborn, Finsbury, Bethnal Green, Stepney, Bermondsey, and Deptford. The 144 fatal cases of diarrhœa were 35 in excess of the corrected average number; this disease showed the greatest proportional mortality in Holborn, Finsbury, Southwark, Bermondsey, Deptford, and Lewisham. In conclusion, it may be stated that the aggregate mortality in London last month from these principal infectious diseases was 9·5 per cent. above the average.

Infant mortality, measured by the proportion of deaths among children under one year of age to registered births, was equal to 128 per 1000. The lowest rates of infant mortality last month were recorded in St. Marylebone, Hampstead, Stoke Newington, Holborn, Bethnal Green, and Woolwich; and the highest rates in St. Pancras, Finsbury, the City of London, Southwark, Bermondsey, Camberwell, Deptford, and Lewisham.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Staff-Surgeons: C. J. E. Cock to the *Queen*, on recommissioning; and C. R. Sheward to the *Majestic*. Surgeons: W. H. Edgar to the *Vengeance*; G. A. Bradshaw to the *Magnificent*; G. L. Buckeridge to the *Kinsha*; and H. M. Braithwaite to Portland Hospital.

ROYAL ARMY MEDICAL CORPS.

Captain Henry J. McGrigor retires, receiving a gratuity (dated Dec. 16th, 1908). The undermentioned officers are seconded for service under the Colonial Office (dated Nov. 27th, 1908):—Captain William M. B. Sparkes, Lieutenant Harold T. Treves, and Lieutenant Gerald J. Keane.

TERRITORIAL FORCE.

Unattached List for the Territorial Force.—The undermentioned officer, from the disbanded 1st Flintshire Royal Engineers (Volunteers), is appointed to the Unattached List, with rank and precedence as in the Voluntter Force (dated April 1st, 1908):—Surgeon-Captain George Osborne Morgan Lunt.

Royal Field Artillery.

1st West Riding Brigade: The undermentioned officers from the 1st West Riding of Yorkshire Royal Garrison Artillery (Volunteers) are appointed to the brigade, with rank and precedence as in the Volunteer Force (dated April 1st, 1908):—Surgeon-Captain Arthur Longley Whitehead and Surgeon-Captain John Nightingale.

Infantry.

7th Battalion, The Northumberland Fusiliers: Surgeon-Lieutenant Charles G. Maclagan resigns his commission (dated Oct. 1st, 1908).

Royal Army Medical Corps.

For attachment to Units other than Medical Units:—Captain Frederick Newman Grinling from the 1st Northumbrian Field Ambulance Royal Army Medical Corps to be Captain (dated Oct. 20th, 1908). James McHoul to be Lieutenant (dated Oct. 19th, 1908). The undermentioned officers from the 1st Battalion, The Herefordshire Regiment, are appointed Captain and Lieutenant respectively (dated Oct. 15th, 1908):—Surgeon-Captain James Neil Macmullan and Surgeon-Lieutenant Arthur Llewellyn Baldwin Green. Surgeon-Captain James Aitken, from the 4th Battalion, The Essex Regiment, to be Captain (dated April 1st, 1908). Captain (Honorary Captain in the Army) George G. Oakley, from the Yorkshire Mounted Brigade Field Ambulance, to be Major, with precedence next below Major William K. Clayton (dated April 1st, 1908). Surgeon-Major and Honorary Surgeon-Lieutenant-Colonel Duncan Stewart, from the 4th Battalion, The Northumberland Fusiliers, to be Major with the honorary rank of Surgeon-Lieutenant-Colonel, with precedence from June 4th, 1902 (dated April 1st, 1908). Surgeon-Lieutenant James Graham Miller, from the 4th Battalion, The Northumberland Fusiliers, to be Lieutenant (dated April 1st, 1908).

2nd Southern General Hospital: James Paul Bush, C.M.G. (late Surgeon-Lieutenant, 1st (City of Bristol) Volunteer Battalion, The Gloucestershire Regiment), to be Lieutenant-Colonel (dated April 1st, 1908). Arthur Launcelot Flemming to be Major (dated Nov. 7th, 1908). Charles Ferrier Walters to be Quartermaster, with the honorary rank of Lieutenant (dated Nov. 7th, 1908).

East Lancashire Division: Honorary Colonel Walter Whitehead, from the Western Command Manchester Companies Royal Army Medical Corps (Volunteers), is appointed to the Honorary Colonelcy, with precedence as in the Volunteers (dated April 1st, 1908).

Welsh Border Mounted Brigade Field Ambulance: Surgeon-Lieutenant George Jubb, from the 6th Battalion, The Highland Light Infantry, to be Lieutenant (dated July 1st, 1908).

1st West Lancashire Field Ambulance: Lieutenant-Colonel Frederick Joseph Knowles, Royal Army Medical Corps, Territorial Force, to be Lieutenant-Colonel (dated April 1st, 1908). The undermentioned officers from the Volunteer Force are appointed to the unit, with precedence as in the Volunteer Force (dated April 1st, 1908):—Surgeon-Captain David Smart, from the 2nd Volunteer Battalion, The King's (Liverpool Regiment), to be Captain. Surgeon-Captain Archibald Gordon Gullan from the 8th (Scottish) Volunteer Battalion, The King's (Liverpool Regiment) to be Captain. Lieutenant Creighton Hutchinson Lindsay from the Western Command, Manchester Companies, Royal Army Medical Corps (Volunteers), to be Lieutenant.

2nd West Lancashire Field Ambulance: Lieutenant-Colonel Thomas Moore Dawson, Royal Army Medical Corps, Territorial Force, to be Lieutenant-Colonel (dated April 1st, 1908). Major Thomas Stevenson, Royal Army Medical Corps, Territorial Force, to be Major (dated April 1st, 1908). Surgeon-Major John Joseph O'Hagan, from the 5th Volunteer Battalion, The King's (Liverpool Regiment), to be Major, with precedence as in the Volunteer Force (dated April 1st, 1908).

3rd West Lancashire Field Ambulance: Captain Elisha H. Monks, Royal Army Medical Corps, Territorial Force, to be Captain (dated April 1st, 1908). The undermentioned officers from the Volunteer Force are appointed to the unit with rank and precedence as in the Volunteers (dated April 1st, 1908):—Major William Baron Cockill, from Lancaster and Border Bearer Company, Royal Army Medical Corps (Volunteers); Captain Claude William Scott Saberton, from the Western Command, Manchester Companies, Royal Army Medical Corps (Volunteers); Captain Henry Dodgson, from the Lancaster and Border Bearer Company Royal Army Medical Corps (Volunteers).

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 3rd Kent (Royal Arsenal): The undermentioned officers resign their commissions (dated March 31st, 1908):—Surgeon-Lieutenant Bernard Hudson and Surgeon-Lieutenant Henry S. Desprez. 1st Norfolk: Surgeon-Captain Harold M. Evans resigns his commission (dated March 31st, 1908).

Rifle: 2nd Volunteer Battalion, The Duke of Edinburgh's (Wiltshire Regiment): Honorary Assistant Surgeon Charles W. Pitt resigns his commission (dated March 31st, 1908).

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

Scottish Command, Edinburgh Company: The resignation of his commission by Captain David Waterston which appeared in the *London Gazette* of Dec. 8th, 1908, is cancelled.

The undermentioned officer, not having signified his wish to join the Territorial Force, is struck off the strength of the battalion:—2nd (Prince of Wales) Volunteer Battalion, The Devonshire Regiment: Surgeon-Lieutenant Peter George Moran (dated Dec. 16th, 1908).

SHELL-FISH AND ENTERIC FEVER.

The General Officer Commanding the South-Western Defence and Plymouth Garrison has recently issued the following order:—The origin of a recent case of enteric fever in a soldier having been attributed to eating shell-fish, the troops are warned against the danger of eating such fish, even when cooked.

Correspondence.

"Audi alteram partem."

STANDARDISATION OF DISINFECTANTS.

To the Editor of THE LANCET.

SIR,—With regard to Messrs. McDougall's letter on this subject which appeared in THE LANCET of Dec. 5th, I am desired by my board to state that they fully agree with the writers as to the desirability of a definite method of test for ascertaining the germicidal value of disinfectants, and that whilst they see no reason for questioning the sufficiency of the "Rideal-Walker" method they would be among the first to adopt any better test were it available.

But they cannot agree that because they have now secured the services of Mr. Ainslie Walker, one of the authors of that test, as their managing director and consulting chemist, the test should therefore be in any way discredited. Messrs. McDougall know perfectly well that when they or we claim a certain coefficiency for our respective products that claim is not adjudicated by the authors of the test but by independent experts who fully understand the method, as it is now in very general use in this country and elsewhere. They should also know that the amplification of the test to meet the case of disinfectants that separate out into layers of different coefficiencies is simply a recognition of a practice which has long prevailed and which was foreseen and provided for in the recommendations of the expert committee of the Royal Sanitary Institute.

With regard to the particular questions that have arisen between Messrs. McDougall and ourselves, and which appear to have occasioned their letter to you, we think it undesirable to make any statement at present, seeing that Messrs. McDougall have indicated the possibility of their seeking the intervention of the court in the matter.

I am, Sir, yours faithfully,

For JEYES' SANITARY COMPOUNDS CO., LIMITED,
WM. PLANNER, Secretary.

Cannon-street, E.C., Dec. 14th, 1908.

To the Editor of THE LANCET.

SIR,—As Messrs. McDougall Bros. and Messrs. Jeyes have both been clients of mine in the past, may I write to say that it seems unfortunate that the letter which Mr. Ainslie Walker and myself sent to you on Sept. 19th should have given rise to any dispute. Both firms should be in a position to know what has been done for the standardisation of disinfectants, so that I am surprised at the suggestions which Messrs. McDougall Bros. now make. The whole question may be resolved into a matter of dates.

1. There is already a well-known standard bacteriological test for disinfectants accepted by all workers here and in the colonies. Five years ago the Royal Sanitary Institute appointed a special committee, consisting of members whose qualifications and whose disinterestedness cannot be questioned, to decide on a definite standard. Their labours extended over two years, and their decision has been accepted and made use of by all workers both at home and abroad, and consisted in recommending for general work the test which Mr. Ainslie Walker and myself had suggested at Bradford in 1903. It should be pointed out that Mr. Walker's appointment in Messrs. Jeyes' Company was two years after the reading of this paper; but even if this had not been the case it should not detract from the value of our method.

2. The offer of a subscription to the cost of such an inquiry is also somewhat belated. When the question was submitted to the Royal Sanitary Institute, Messrs. Jeyes, through me, formally offered to bear its entire cost, but the institute preferred to meet the expenses out of their own funds and so happily averted the possibility of any suggestion of commercial influence on the result of the committee's work.

3. The last clause of that committee's report read thus: "Where special conditions exist which may interfere with the activity of the disinfectants, the consumer should be advised to call for the same conditions to be embodied in the test." Of late, medical officers of the City of London and other important towns have inserted in their tender forms a stipulation which, whilst requiring no change in the technique of the original test, calls for a modification of the condition in which the disinfectant is presented for examination; and it was with the object of introducing some uniformity in the method of controlling this condition—too indefinite as it stands—that we put forward the suggestion which appears in our letter of Sept. 19th. In that letter we did not intend to modify in any way the value of the simple test as originally put forward and should be very sorry if other readers of the letter should put such an interpretation upon it.

In conclusion, Sir, the matter may be summed up thus: There is, and has been for some years, an authoritative standard which has met with general acceptance. The inclusion of the condition of behaviour on standing has been suggested by several medical officers of health acting in the interests of the public. Both firms tell you that they have some preparation that conforms to the Rideal-Walker test after the disinfectant has been diluted, so proving that this new condition of non-separation on standing is fulfilled. I have not yet had an opportunity of examining a sample of Messrs. McDougall's preparation in this way but do not doubt their word. In that case they will be able to compete in the open market under conditions which are open to all other manufacturers. I am, Sir, yours faithfully,

Victoria-street, Westminster, Dec. 11th, 1908. SAMUEL RIDEAL.

*** In our footnote to a letter from Messrs. McDougall Bros. we said that there was a need for a standard method of conducting bacteriological tests for disinfectants. Nothing in Dr. Rideal's letter leads us to change our opinion. Dr. Rideal omits to say that the report of the special committee appointed by the Royal Sanitary Institute was not adopted by that body. It is not officially published.—ED. L.

THE VALUE OF CALMETTE'S OPHTHALMO-TUBERCULIN REACTION IN DISEASES OF CHILDREN.

To the Editor of THE LANCET.

SIR,—There has been recently considerable discussion as to the diagnostic value of Calmette's ophthalmo-tuberculin test in tuberculous disease. Whilst some believe it to be of great value, other observers are sceptical of its use, putting forward morbid conditions other than tubercle which give the reaction. Of its use in adult diseases not seen in a children's hospital I have had practically no experience, but venture to think that the following collection of cases clearly shows that the test, at least in children, is highly satisfactory. The solutions used (0·5 per cent. and 1 per cent.) were made from the powder, which is decidedly cheaper and as efficient as that made up ready for use in ampoules. The 1 per cent. is recommended to be used in those cases of suspected tuberculous disease where failure has occurred with the 0·5 per cent., but I found that those rare cases that failed to react with the weaker solution failed also with the stronger, or produced such an indefinite reaction as to be reckoned a query positive. The accepted reaction implies reddening of the ocular conjunctiva, the conjunctiva of lower eyelid and caruncle; but the delicate pink blush of the conjunctiva alone, by far the most frequent manifestation, is sufficient for a positive reaction. Some subjects give the reaction in both eyes when only one has been put to the test, and in one or two cases the opposite eye to that tested has actually been seen to react, the one treated remaining normal.

With regard to the time of reaction, although the whole cycle may be complete in eight hours, the reaction usually begins about the sixth hour, reaches its maximum in 12, and lasts 24 hours. In only one case out of 45 was there the least anxiety felt. Here the patient, a tuberculous child, reacted strongly, causing slight chemosis and photophobia. This, however, cleared up with frequent washings of boric acid lotion in four days.

In all Calmette's solution was used on 45 children varying in age from 3 months to 14 years. Of these 21 gave the positive reaction; 16 were verified by post-mortem examination, and 5 gave clinical evidence of tubercle. Of 17 cases of suspected tubercle, negative to Calmette's test, 9 at the necropsy were found to be free from any sign of tubercle; 5 where an examination could not be obtained gave no clinical

evidence of tubercle; and 3 were discharged in whom there was undoubted evidence of tubercle—viz., one case of phthisis advanced to cavitation and two patients suffering from tubercular peritonitis, having masses easily felt in the abdomen. Of 7 cases where tubercle was suspected one positive reaction occurred (the diagnosis resting between sarcoma and tubercle); tubercle was found at the operation. Of the remaining six, the diagnosis resting between empyema and tubercle, all failed to react, and were operated upon and found to be empyemata. Two died later and no tubercle was found at the post-mortem examination.

Two cases where the reaction was so indefinite (with 1 per cent. solution) that it was queried positive were found at the necropsy to be tubercle. These I have not included. It will be seen that in every case where a positive reaction was obtained tubercle was either found post mortem or definite clinical signs were evident. Three inaccuracies out of 45 cases occurred, but these were of the negative order. The patients submitted to the test were all under the care of the senior physicians, to whom I am indebted for the publication.

I am, Sir, yours faithfully,

HENLEY H. MOYLE.

East London Hospital for Children, Shadwell, E.,
Nov. 28th, 1908.

EPSOM ASYLUMS.

To the Editor of THE LANCET.

SIR,—In your issue of Dec. 5th is a short comment on the public meeting held in Epsom to protest against the walking parties from the lunatic asylums of the London County Council. As your remarks are likely, I think, to give a wrong impression as to the feeling in this locality on the question of the exercise of the lunatics in public, and also as to the object and result of the meeting, I hope you will give publication to these remarks. There were several motions before the meeting in addition to the one asking the London County Council to put a stop to "the practice of walking parties outside the asylum grounds" which you allude to, and one of the most important was the one asking the London County Council to direct attention to the escapes of lunatics. The result of the meeting was that the motions were passed and not lost by a large majority as you state. There were no direct attacks made on the medical superintendents as such, though, of course, the administration which permitted the walking parties and the escapes was adversely criticised, but the "attacks," if they can be called such, were directed against the asylums committee as a whole. As regards "the improvement in the mental state of the lunatics likely to be derived from the change of air and scene" there is some divergence of opinion amongst the medical superintendents of the asylums in this district as regards change of scene, for the medical superintendent of one of the asylums here does not permit the lunatics to exercise outside the grounds of the asylum he is in charge of, and his results are as good as the results of those who permit the walking parties outside the asylum grounds.

As was pointed out at the public meeting, the grounds of the asylums near here are extensive and give ample room for exercise, but no doubt popular opinion would be pacified if the asylums committee were only to allow small parties of selected patients with *adequate* escort to walk the public roads, and also if the asylum authorities take more active measures as regards escapes. As a result of the meeting a committee is to wait upon the Prime Minister, the Home Secretary, and the Lunacy Commissioners if found necessary.

I am, Sir, yours faithfully,

Dec. 8th, 1908. HORTON.

A SERUM TREATMENT OF CARCINOMA IN MICE.

To the Editor of THE LANCET.

SIR,—You were good enough to verify by a note to my letter published in THE LANCET of Nov. 28th a quotation from a letter written to me by Dr. Borrel on Nov. 12th last, in which he said that he had done "nothing resembling" my experiments with sera upon carcinoma in mice. Dr. Blair Bell has stated that I had repeated Dr. Borrel's experiments. I have shown conclusively that I did nothing of the kind. He stated that I was self-invited to the Liverpool Medical Institution. I was not. In spite of this, in his letter to you published on Dec. 12th Dr. Bell attempts to maintain his original position, although he uses vague words of apology.

I am, Sir, yours faithfully,

CHARLES WALKER.

Cancer Research Laboratory, University of Liverpoo
Dec. 12th, 1908.

THE CAUSE AND PREVENTION OF DENTAL CARIES.

To the Editor of THE LANCET.

SIR,—In the discussion on "The Cause and Prevention of Dental Caries," which has been published in recent numbers of THE LANCET, it has been assumed that extreme frequency in the occurrence of dental caries is a purely modern phenomenon which most writers attribute to "modern dietetics" or "the changes the food of man has undergone during the last few centuries."

I would like to call attention to the fact that 5000 years ago, in the time of the Pyramid builders, dental caries and alveolar abscesses were at least as common amongst the *adult aristocracy* of Egypt as they are in Europe to-day, although dental caries was rare among the people of lower social status and almost unknown in children. Among several thousand children found in ancient Egyptian graves I have seen only three instances of caries in deciduous teeth.

These facts, I think, support the general conclusions to which the discussion has pointed.

I am, Sir, yours faithfully,

Cairo, Dec. 7th, 1908. G. ELLIOT SMITH.

THE USE AND ABUSE OF ALCOHOL.

To the Editor of THE LANCET.

SIR,—Last night I attended a meeting of the United Services Medical Society, held at the Royal Army Medical College, when a most interesting and instructive discussion took place on the use and abuse of alcohol. The question was raised as to whether the total abstaining races, such as the Hindoos, the Persians, and the Fellaheen of Egypt, showed any evidence of being more moral or progressive than the races that take alcohol, and it was also pointed out that all the progressive races, including the Japanese, take it. The total abstainers present did not attempt to answer this point, but it would be interesting if some of them could do so in your columns. Incidentally, they might also try to explain why the total abstainers have practically never produced great admirals, generals, or statesmen.

I am, Sir, yours faithfully,

H. N. ROBSON.

Junior Constitutional Club, Piccadilly, W., Dec. 11th, 1908.

THE STERILISATION OF POTABLE WATERS BY MEANS OF CALCIUM HYPOCHLORITE.

To the Editor of THE LANCET.

SIR,—Your correspondents, referring to my brief contribution to your journal of Nov. 28th, overlooked the most essential point to which I directed attention—viz., that in waters free from suspended matter and of fair organic purity an almost infinitesimal amount of chlorine suffices for practical sterilisation. Experiments now being conducted on a larger scale indicate that the same results are obtainable as in laboratory experiments. I believe that I am in possession of all the reports which have been referred to, and hitherto the amounts of chlorine which have been used for sewages and dirty waters, whilst showing that even such waters were capable of being sterilised, gave very little ground for hoping that the process could be made a practical one.

May I also direct attention to an error in the original paper? I find that the hypochlorite can be purchased at £7 per ton, or less than half the price I first had quoted. This means that about 25,000 gallons can be sterilised for one penny. When electrical treatment can be shown to produce the same effect for less money I will give it further attention.

I am, Sir, yours faithfully,

London Hospital Medical College, JOHN C. THRESH.
Dec. 15th, 1908

BALTIMORE AND THE JOHNS HOPKINS HOSPITAL.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

THE city of Baltimore is celebrated throughout the world, at least among University scholars and the medical profession, for its Johns Hopkins University and the Johns Hopkins Hospital. It is only in America that such institutions spring into existence at the bidding of one single individual. This is certainly not an unmixed blessing but it is a very remarkable fact. A merchant named Mr. Johns Hopkins died in 1873 and bequeathed £700,000 so that a university should be established at Baltimore. The special features of this University are the inducements and facilities offered for post-graduate work. So much is this the case that more than half the 700 to 800 students attending have already graduated in other universities. Not only did the late Mr. Johns Hopkins endow the University but he left a sum nearly as large—namely, £600,000—so that a model hospital which should serve as a scientific and charitable institution might be built in connexion with the University. In these circumstances it was only natural that the foreign members of the International Congress on Tuberculosis which recently met at Washington should be invited to visit Baltimore and its University, and this they did in large numbers. They were well received. The services of numerous motor-cars had been secured and in the early morning the visitors were fetched from their various hotels and conveyed to the town hall. Here the mayor and the secretary of the State of Maryland said a few words of welcome and then the automobiles took the visitors over the town and away into the beautiful wooded parks that surround the city. The residential quarters are specially favoured, for the houses are not high and yet many of the avenues are so broad that there are gardens and trees down the centre of these thoroughfares. But undoubtedly the principal object to be seen was the Johns Hopkins Hospital which was reached later in the morning. The magnificence of the site and the abundance of surrounding open space constitute the first favourable impression. This is all the more remarkable as the hospital is not in the outskirts but in the centre of the city, and furthermore it stands on an elevation on the crest of rising ground. Thus outdoor treatment can be employed here. The fine open galleries running from pavilion to pavilion provide broad terraces where beds can be wheeled out and the patients left to enjoy the open air.

There is room in this celebrated hospital for 380 in-patients but some of these are paying patients and are charged £1 (sometimes even £2) a day, all included. Dr. John S. Billings of the United States Army had helped to design the hospital and he is one of the best known authorities on warming and ventilating. In these circumstances I hastened to the surgical ward where it was probable that Dr. Billings's system would be most carefully applied. This is a circular ward, with a big towering shaft in the centre and the beds in the outer circle, their heads being against the wall and between the windows. Dr. Billings prefers this arrangement to that of the circular ward at the Antwerp Hospital, of which he gives an illustration in his text-book. The original object of a circular ward was to disinfect the air that came from small-pox patients. Then the beds were placed against the central trunk or tower; the air came through the outer circle or walls and reached the beds only at the end of its journey, and it was then at once drawn into the tower where it was sterilised by passing through fire before it was discharged into the open. The scheme was to allow 1200 cubic feet of air per bed, so that for 12 beds 120,000 cubic feet of air should be supplied per hour. Primed by these teachings, derived from Dr. Billings's standard work, I naturally inquired to what extent they were realised at the Johns Hopkins Hospital. From the members of the medical staff who were showing us round I first asked what was the cubic space allowed per bed. They did not know. Then I asked what was the system of ventilation. About this they were equally ignorant and it seemed to them quite a new idea to have to consider such matters. Some of the medical men whom I questioned had followed the clinics in this hospital for many years but it had never occurred to them to inquire how the building was warmed and ventilated. It was obvious that an elaborate system of ventilation had been devised but it was equally obvious that no one seemed to have taken any concern about it.

Considering that the visitors to the Johns Hopkins Hospital had come from the Congress on the prevention of tuberculosis; considering that a plentiful supply of fresh air is the best preventive of tuberculosis and a powerful aid in its cure; considering further, that Dr. John S. Billings is one of the greatest authorities on ventilation and that he helped to design the hospital, it was natural to expect that the system of ventilation would have been in full working order and that experts would have been on the spot to explain all the details. As a matter of fact, this most important phase of the problems at issue was entirely overlooked. Yet one of the leading representatives of the medical profession of Baltimore, Dr. Henry Barton Jacobs, had read a paper at the Washington Congress on the necessity of teaching hygiene in the schools. In this paper he said:—"Hospitals, sanatoria, dispensaries, camps may have great influence in alleviating, or even curing, those already infected with tuberculosis or other infectious diseases, but their influence in checking the spread of that disease is to be found in education as to necessary precautions and the proper manner of life. These institutions, therefore, become schools in which *hygiene* is taught to their inmates." Then further he adds: "The public schools, academies, and colleges are a series of institutions which are moulding the growing intelligence of the country, their pupils of to-day will be the men and women of to-morrow, and if in them the same kind of instruction in hygiene could be given in a practical, effective, and convincing manner as is given to patients in sanatoria, they would be sending out into the world a youth ready for the emergencies of life and with an understanding of how to avoid the preventative diseases."

These undoubtedly are excellent sentiments but how are the children in the schools to be taught hygiene when the professors in the universities fail to apply its principles? Having secured the help of one of the greatest living authorities on the subject, the Johns Hopkins Hospital should be an object-lesson to all comers in the science of supplying, without draught or any inconvenience, exactly the right volume of air at the necessary temperature to every person in the building. Instead of a model institution I found the utmost confusion and ignorance. In a medical ward there was a little wirework object under the beds that looked like a rat-trap. It covered what was stated to be an air outlet and a fan was supposed to draw the air down into an exhaust shaft. But the fan was not working when I tested this supposed outlet. Then, as windows were open close by, the air would go from the window to the outlet in a direct line and only affect the greater part of the ward by an occasional eddy. The temperature at the time of my visit was 62° F. Windows were opened according to the fancy of individuals who knew nothing whatever as to the system of ventilation and seemed quite unaware that it sufficed to open a window to destroy effectively most systems of ventilation. So complete was the confusion that apertures said to be inlets were acting as outlets when I tested them. All this was most disappointing and I could not but wonder whether Dr. Billings is aware how the good work which he has done has been forgotten, neglected, or misapplied.

At the Washington Congress there was also a paper read by Miss Mary E. Lent, graduate of Johns Hopkins Hospital, head nurse of the Instructive Visiting Nurse Association. Miss Lent explained that during the last four years some 3000 tuberculous patients had been visited in their own homes at Baltimore by the nurses of her association. The object of these visits was quite as much to teach as to tend the sick and their families. But "the work of teaching was slow" and "in the case of the very poor it is impossible to teach them to persistently apply the principles of prophylaxis to their daily lives." When this was the case "something more radical had to be done." The nurse should inform the public so that the public might decide on the segregation of patients who were dangerous to the community. Thus spoke Miss Lent at Washington. So here is a picture of some 3000 patients living at Baltimore where they are taught by Miss Lent and her assistant nurses to adopt all kinds of precautions and to make the utmost use of the very slender advantages which, in spite of their poverty, they may enjoy. If,

however, they fail to avail themselves of this teaching they are to be menaced by the law, snatched from their homes and forcibly isolated. But have the teachers themselves always profited by every opportunity of learning? How about the Johns Hopkins Hospital? It is not afflicted with poverty. Money has been lavished so that the latest improvements might be introduced. Nor is it in the hands of "a class of people that cannot be taught." On the contrary, it is a seat of learning and an annexe of the Baltimore University. Nevertheless, extraordinary ignorance is displayed in regard to so important a matter as ventilation. An elaborate system for providing such an essential as pure air at a desirable temperature is allowed to fall into disuse. The principal object-lesson which could have been provided to the visitors who came from all parts of the world and who, in many cases, had been students of Dr. Billings's work was completely lost sight of. What was most in the minds of those who received us was not the Johns Hopkins Hospital itself but a recently constructed annexe known as the Phipps Dispensary. This is simply an out-patients' ward devoted solely to cases of tuberculosis—an excellent thing in its way but I failed to see anything specially novel or instructive in its structure. A few patients come here on their own initiative but the greater part are sent by the visiting nurses or are transferred from the general out-patient wards. This dispensary has no beds at its disposal but works in conjunction with the city and Jews' hospitals for advanced cases. It has been in existence for three years, with about 600 patients the first year, 800 the second year, and 1000 the third year. This is the largest dispensary in Baltimore and there is a sanatorium at Endowood with 30 beds for advanced cases and 60 beds for incipient cases. Then there are 150 beds in the city hospitals for cases of tuberculosis; altogether there are 250 beds available for the treatment of this disease. The State of Maryland is now building a sanatorium for 300 early cases, but as it is estimated that there are some 10,000 such cases in this State it does not seem that Maryland has very much to teach Europe in this respect. On the other hand, the book on ventilation by Dr. Billings is the work of an American which is known and highly appreciated in Europe. Therefore the visitors who came to Baltimore from Europe would have been greatly edified if they could have seen a practical application of Dr. Billings's teaching.

In all other respects the visitors to Baltimore can only congratulate themselves on the excellent reception which they enjoyed. The greatest care was taken of them, every courtesy was shown, and all left Baltimore with regret at parting so soon from such amiable hosts. Dr. T. B. Futcher, the chairman of the reception committee, was indefatigable and Dr. Henry Barton Jacobs entertained all the visitors to an excellent banquet. The greatest friendliness and cordiality prevailed and our hosts showed a truly international spirit in the welcome which they gave us.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The University.

Professor Hillhouse, who has been connected with Mason College and with the University for about 25 years, and who has held the chair of botany in both institutions, has informed the council that he wishes to retire from active work at the end of the present academic year. He is one of the oldest members of the staff and all his colleagues regret the long-continued ill-health which has made Professor Hillhouse feel that he must lead a less laborious life. He is well known and universally respected and will carry with him not only the good wishes of the University staff but also of a large circle of friends.

The Women's Hospital.

A new branch of the Women's Hospital League has recently been instituted in Moseley, a wealthy residential district quite capable of providing the whole of the additional £1000 a year which it is one of the league's objects to attain, and if the local branch now instituted works energetically and tactfully the result of its efforts will be very valuable to the Women's Hospital. In proposing the formation of the branch, Mrs. Nettlefold, the president of the league, gave an interesting *résumé* of the history of the hospital. It was established at first in a small private house in the Crescent which provided eight beds. In a few years expansion became necessary and the committee secured a farmhouse in Stratford-road which was capable of adaptation. The building was gradually enlarged until the number of beds was increased to over 30 and excellent work was done. Further enlargement in Stratford-road eventually became impossible, but the increase of the work continued, so a building fund was started and the present in-patient hospital and convalescent home in Sparkhill were obtained. 60 beds are now available and an additional £1000 a year has become a necessity if the work is to be continued properly. Mrs. Nettlefold struck the right note when she pointed out to the large meeting which she addressed the fact that the hospital was doing special work, that it required special appliances, and that if the work done was to produce the greatest advantage the hospital must be kept in the front rank of the Birmingham hospitals. During the time that the hospital has been in existence the death-rate for the special conditions with which it deals has fallen from 60 per cent. to 2¾ per cent., and the difference between the two rates means a very great alleviation of suffering. Any very considerable further fall of the mortality rate is not possible but the work of the hospital can still be increased, and the object is one which ought to appeal strongly to all the women of Birmingham, and particularly to those who are themselves to a certain extent shielded from the dangers to which their less fortunate sisters are exposed.

The Research Defence Society.

A general meeting of the Birmingham branch of the Research Defence Society was held on Dec. 11th. Professor R. F. C. Leith, who occupied the chair, referred to the objects of the society and pointed out that when the branch was started in May last it possessed only 14 members. Since then 68 additional members have joined, of whom 30 are non-medical and five are ladies. The society now includes many of the influential and thoughtful citizens of Birmingham, who recognise that the primary object of man is the welfare of mankind. The meeting appointed a small executive committee, to which it gave a general instruction to take the necessary steps to bring the objects of the society before the general public.

Jubilee of the Birmingham Dental Hospital.

The jubilee of the Birmingham Dental Hospital was celebrated on Dec. 10th by a reception which was especially well attended. After the reception the prizes won during the year were presented to the successful students by Mr. Matheson who gave an interesting address upon the Relation of the Teeth to General Health. The fiftieth anniversary of the foundation of the hospital has happened to fall in the year which has shown by the increased entry of students that the public are beginning to realise that the Birmingham Dental School is one of the best-equipped schools in the country and for that reason, together with the fact that it is intimately associated with the University, it offers special facilities to the dental students who have every opportunity of preparing themselves for the diplomas of the various licensing bodies or the degrees of the University, whilst at the same time they have unrivalled opportunities of obtaining that practical experience which is so essential for future success.

The New Dispensary Scheme.

It is intended to commence the work of the new provident dispensary with the coming of the New Year and steps are being taken to bring the scheme to the notice of that part of the public which is likely to make use of it. The objects of the scheme are to give facilities to those who cannot pay ordinary fees but who are still able to pay something for medical help and to reduce the pressure in the out-patient departments of the hospitals. The committee of control consists of seven adult members of the dispensary; seven members of the medical profession nominated in the first instance by the General Medical Practitioners' Union and afterwards appointed annually, one by each of the seven branches of the dispensary staff; seven members appointed by the Birmingham branch of the British Medical Association; the remaining eight members of the general committee are appointed as follows—one by each of

the four general hospitals, two by the General Dispensary, one by the City of Birmingham Aid Society, and one by the Hospital Sunday Fund. The interests of the medical profession are therefore well guarded, for it will always have at least 14 members on the general committee. The fees payable by the members are 5*s.* a year, or 5*d.* a month for each individual, or for every member of a family up to four, and for each additional member of a family above four and residing in the same house 3*d.* per month. The members may make their own selection from the medical staff and every qualified medical man of good repute who does not hold a private club appointment may become a member of the staff. In order that the various provisions above enumerated may become generally known, printed copies of a brief statement of the objects, advantages, and scales of payment are being supplied to the four general hospitals for distribution in the out-patient departments. Similar statements will also be distributed at the seven branches of the General Dispensary, circulars will be sent out to 2000 firms asking them to display notices in placard form in their works, and a circular will be addressed to the members of the medical profession asking them to coöperate and to become members of the staff of the new dispensary.

Dec. 15th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Biennial Dinner of the Clinical School of the University of Liverpool.

THE biennial dinner of the Clinical School connected with the University of Liverpool took place on Dec. 12th, at the Adelphi Hotel, under the chairmanship of Sir James Barr. Among the numerous guests was Sir Dyce Duckworth of London, who proposed the toast of "The Liverpool University and Clinical School." He said, as an old Liverpool man, that the toast appealed to him very warmly. In his early days, long before the University College was founded, there were certain educational establishments in the city, and there were, as there always had been, men of learning and of educational instinct in the city who projected and foresaw what had happened to-day. He could only recall one mistake, as he thought it was, in the city with respect to secondary education, and that was the abolition of his old and venerable school, the Royal Institution, a matter which he had always regretted when he remembered the splendid work which that school performed for the city in forming the characters of some of the most eminent men of the present day. He said that the University of Liverpool must not be a mere technical school for producing engineers or medical men, but an institution for the promotion of learning in its widest sense. He felt sure that the University of Liverpool was founded in a way which was a credit to the city and which would establish it in a position second to none among the universities of the country. As to the Clinical School, he said that he got his clinical experience in the Liverpool hospitals. He saw that they had arranged for the most complete course of clinical instruction in all branches of work, and nothing could be better than that. Colonel Stanton, D.S.O., in replying for the army, said that there were many points on which there was a close sympathy between the medical profession and the army. Referring to the Territorial Army scheme, he said that he was confident that the medical profession would give every assistance to that great undertaking. Speeches were also delivered by the chairman, Sir Edward Russell, Professor John Hill Abram, and others. The dinner was one of the most successful medical gatherings held in Liverpool in recent years.

Winwick Asylum: New Annexe.

The new annexe at Winwick Asylum was formally opened last week by the chairman of the committee, Mr. S. S. Brown. It is intended to accommodate 120 idiot children and 12 adult females, and has cost a little under £22,000. The average cost per bed is thus a little more than £166. The chairman explained that this was an extremely low average. The total cost of the main building was £460,000, which for 2000 patients gave an average cost per bed of £230. Some of the recently built London and Yorkshire asylums cost from £400 to £430 per bed. He hoped the Asylums Board would now consider the advisability of erecting a similar annexe for the accommodation of the girls. Mr. N. W. Helme, M.P., the chairman of the Lancashire Asylums Board, complimented the committee on taking the lead in the care and treatment of the feeble-minded. He endorsed the chairman's hope as to the provision of a new annexe for the girls.

Dec. 15th.

NEWCASTLE-UPON-TYNE.

(FROM OUR OWN CORRESPONDENT.)

House-flies and Enteric Fever.

IN August last a small epidemic of enteric fever occurred among the staff of the City Hospital for Infectious Diseases. Ten persons in all were affected, one of the resident medical officers, three nurses, and six maidservants being attacked with the disease. It would appear from the histories of the cases that in every case the infection was contracted at or about the same time, and that the very early part of August. In tracing the source of infection some considerable difficulty was encountered. The water-supply of the hospital was good and there was no evidence which would incriminate the milk as it was supplied to the institution, the dairy whence it was obtained was in a generally satisfactory condition, and no cases occurred among the customers of the dairy outside the hospital. The entire staff of the hospital was "tested bacterially" and no "carrier" of the disease was found among those not included in the ten persons above mentioned. Seeing that it was probable that the infection in all these cases was contracted at or about the same time, that the persons affected were all milk-drinkers, and that the infection was not conveyed by "ordinary channels," Dr. H. E. Armstrong, the medical officer of health, has come to the conclusion that the facts quoted, "coupled with that of the swarms of flies during the hot weather at the time, together with the total absence of any other explanation, established the conviction that the infective germs had probably been carried by flies from the enteric pavilion to a bowl of milk in the dairy, and after multiplication these had been distributed and consumed by the members of the staff who afterwards suffered from fever." This outbreak of enteric fever among the staff of the hospital is presumably the origin of the "instructions to the officials on duty in the enteric fever pavilion" which have already been noticed in the columns of THE LANCET. These instructions are valuable so far as they go, but it is noticeable that there is nothing in them which will prevent another outbreak among the administrative and nursing staff similar to the one recorded above. If the passage of flies from the enteric fever pavilion to the dairy was in fact the source of the infection, and Dr. Armstrong is apparently satisfied that it was, it seems desirable that "instructions to the officials having charge of the dairy" should be drawn up and issued. The obvious way to prevent a similar "regrettable incident" occurring in the future would be to take steps to prevent the transit of flies from the enteric fever pavilion to the dairy. This should be easy if the opening into the dairy were fitted with close-mesh wire gauze. It certainly struck one as being very lax administration that in a fever hospital where the danger from flies in enteric fever should be so well known it should be possible for flies to have such easy access to the dairy. Of course, the true source of the infection may have been some quite other cause than flies, though Dr. Armstrong after careful investigation attaches the blame to these insects, but whether or not his conclusion be the right one in this case the opportunity should be taken for issuing more stringent regulations for the control of the dairy.

The Chapel of the Royal Victoria Infirmary.

A special meeting of the house committee of the Royal Victoria Infirmary is to be held on Thursday, Dec. 17th, to discuss matters in connexion with the infirmary chapel. The important business before the meeting will be the consideration of the following proposition to be moved by Dr. G. H. Hume, consulting surgeon to the infirmary. The terms of the motion are:—

That upon the various points which have arisen in regard to the consecration and user of St. Luke's Chapel it is desirable that a case be stated for the opinion of two eminent counsel in consultation, one an ecclesiastical lawyer and the other a lawyer accustomed to deal with

questions of property as administered by the Chancery Division of the High Court.

It is most satisfactory to know that steps are apparently now to be taken to put an end to the state of affairs, almost unthinkable in a public hospital, but which now exists at the infirmary as a result of the action of the governors last February in prohibiting any religious service in the infirmary.

Dec. 15th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Women Graduates and the University Franchise.

AS has been noted in THE LANCET from time to time, some of the women graduates of the Universities of St. Andrews and Edinburgh had carried to the Court of Session in the first place, and to the House of Lords finally, the contention that they were entitled to vote at the election of a Member of Parliament for the Universities in virtue of having received the University degree and of being enrolled as members of the general council of their University. The House of Lords gave its decision on Dec. 10th and, as was anticipated by those who followed the case, the decision was adverse to the claims of the women. The Lord Chancellor stated that two points had been raised: (1) the right to vote and (2) the right to get voting papers; and he dealt with the questions in that order. He held that no authentic and plain case of a woman giving a vote had been submitted, although various anomalies may have occurred and been overlooked in confused times. A few equivocal cases had been referred to and he was surprised how few they were. In regard to judicial precedents, two passages might be found in which judges are reported as saying that women may vote at Parliamentary elections, but these dicta were derived from an ancient manuscript of no weight. Lord Coke referred to the disability of women, and this disability, the Lord Chancellor held, had been taken for granted. He thought it incomprehensible that anyone acquainted with our laws and the methods by which they are ascertained could think there was room for argument on such a point. It was notorious that the right of voting has been confined to men. Not only has it been the constant tradition but it has been the constant practice from the earliest times. Numberless rights rest upon a similar basis; indeed, the whole body of the common law has no other foundation. He held that if this legal disability is to be removed it must be done by Act of Parliament. The appellants hold that it has been so removed, but the Lord Chancellor equally strongly sets aside this contention. Lord Robertson followed the same line, arguing in detail against the view that Parliament in the case of the Scottish Universities had departed from the fact that from immemorial time men only had voted. The appeal was dismissed with costs.

The Bill for the Registration of Nurses.

On Thursday, Dec. 10th, a meeting was held in the hall of the Royal College of Physicians of Edinburgh to consider the application in Scotland of the Bill for the Registration of Nurses. At a representative meeting the provisions of the Bill were severely criticised and a small committee of nine persons was appointed to consider the provisions in detail.

Infantile Mortality in Edinburgh.

Definite steps are being taken in Edinburgh with a view to the lessening of infantile mortality in the city. It is intended to concentrate effort on the Lawnmarket district of the old town. The scheme which is to be put in operation is to have a large number of voluntary lady visitors whose duty it will be to visit when the birth has been intimated, the intimation now requiring to be made within 24 hours of the birth. The visitors are to be instructed in the management and rearing of babies. The first of a series of lectures with this as their object was delivered last week by Dr. Elsie M. Inglis. Dr. A. M. Williamson, the city medical officer of health, occupied the chair and spoke of the great good which such an army could do towards the uplifting and the educating of the poorer classes and was confident that all doors would be opened readily for their entrance.

The Inebriates Act.

A meeting of the Departmental Committee appointed to inquire into the working of this Act was held in Edinburgh on Dec. 10th. Dr. J. Craufurd Dunlop, inspector under the Act, was examined as a witness.

Imbecile Patients in Fever Hospitals.

At a meeting of the eastern district committee of Stirling county council held last week a minute of the hospital committee was submitted in which it was stated that Dr. R. D. Clarkson, Falkirk, had made application on behalf of the Scottish National Imbecile Institution, Larbert, for the admission of a number of fever patients from that institution into the county hospital. It was unanimously agreed that members of the staffs of the Imbecile Institution and the Stirling District Asylum, Larbert, should be admitted to the hospital in the usual way and that lunatic or imbecile patients should be not admitted.

Kingseat Asylum Statistics.

A return of the salaries and wages paid to asylum officials and labourers for the years 1906, 1907, and 1908, which has just been submitted to the Aberdeen Lunacy Board, shows that the average number of patients has increased during the period from 392 to 411; the staff from 79 to 89; salaries and wages only from £2801 to £3129; salaries and wages, including board, from £3595 to £4017; and under "providing," the wages, including those of tradesmen and temporary labourers, had risen from £414 to £565. It was also stated that the amount of salaries and wages per patient at Kingseat was well below the average for the Scottish asylums, and in that item of the maintenance account Kingseat was about £1 per patient lower than any of the new asylums.

Death of Mr. William Mackie, M.A., M.D. Aberd., Milwaukee.

Information has just been received of the sudden death on Dec. 8th of Dr. William Mackie of Milwaukee. Dr. Mackie was a son of the late Mr. William Mackie, Petty, Fyvie, and studied at Aberdeen University, of which he was a graduate in Arts and Medicine. About 25 years ago he went to America and in Milwaukee, where he ultimately settled, he built up a large practice. He was married to Miss Bella Mitchell, daughter of the late Mr. George Mitchell, St. John's Wells, Fyvie, and is survived by his widow and one son, who is by profession an engineer. Dr. Mackie was 54 years of age.

Notification of Pulmonary Tuberculosis at Newport.

In accordance with the suggestion of the Local Government Board the town council of Newport has agreed to have all deaths from pulmonary tuberculosis intimated to the local authority, so that the sanitary inspector can then visit each case and suggest or carry out disinfection as the circumstances may seem to warrant. A further recommendation was also adopted that the necessary disinfectants should be supplied free to parties within the burgh where the medical officer considered that they should not be asked to bear the expense, it being understood that the expenditure should not exceed £5 a year. It was also suggested that antitoxin should be supplied free in similar circumstances and under the same conditions.

Appointment.

Dr. A. Robb (Paisley) has been appointed medical officer of health of Midlothian, Linlithgow, and Peebles. Dr. Robb, who is 38 years of age, is a graduate of Aberdeen University. For about a year he was attached to the public health department of Aberdeen under Dr. Matthew Hay. In June, 1896, he was appointed assistant and deputy officer of health of the county of Lanark and held the appointment for nearly five years. In March, 1901, he was appointed medical officer of health of the burgh of Paisley, a position which he has held up to the present time.

Dec. 13th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Old Age Pensions Act and the Dispensary Medical Officer's Certificate.

ONE aspect of the Old Age Pensions Act presents a flaw which has been energetically exposed by Dr. G. E. J. Greene of Ferns in a letter to the daily press, as a factor

likely to prove productive of much annoyance and unjustifiable misrepresentation to the long-suffering dispensary medical officer. He points out that: "It seems to be a frequent practice of members of Pension Committees, to save themselves the odium and trouble of verifying, or rather falsifying, the statements of naturally fluent and persuasive applicants, who may often possess a better knowledge of the Act or how to come within it than they, to refer all such applicants to the district medical officer, with sometimes the injunction, 'He (the Doctor) can get it (the pension) for you, if he wishes.'" All of us who possess any intimate knowledge of the rural life and medical practice of Ireland recognise the vivid truthfulness of this representation. And as Dr. Greene indignantly—and most justly—asks: "Why endeavour to place more trouble and responsibility on the shoulders of the long-suffering dispensary doctor which he is not legally bound to undertake, when a reference to the relieving officer's or clerk of union's book would settle matters at once. A straightforward and honest statement to these poor and deserving, but most persistent and not always truthful, applicants—'That they cannot obtain any benefit under the Act till it has been changed by Parliament'—would save much time, troubling, and heart-burning." Dr. Greene, who is discussing the defect in the Act with regard to recipients of out-door relief who under the Act are most unjustly excluded from its beneficent provisions, is not only a dispensary medical officer and the holder of an exceptionally large number of other professional appointments, but he is also a magistrate, so that he has had the full opportunities of verifying his data and testing his own opinions.

Death-rates in Irish Towns.

The principal capital cities and seaports of the western Irish counties have been distinguishing themselves during the past week by the unenviable notoriety of an enormously high death-rate. Sligo leads off with the startling figure of 43·2, while Limerick and Galway have each exceeded 30. The lowest record was that of Ballymena, which was 4·8, while Tralee (5·3) and Dundalk (8·0) were the only other town areas of which the registration was below 10. The aggregate record of the 22 principal town districts of Ireland for the week was 20·3; the average of the four weeks ending Dec. 5th was 19·6. The highest death-rate from epidemic disease was that of Lisburn (4·5). 16 of the town districts reported no death from epidemics. The average for all Ireland was but 1·0. Two deaths from scarlet fever occurred in Limerick; two from enteric fever in Belfast; while diphtheria accounted for 20 per cent. of the deaths in Lisburn. Dublin had 185 deaths and 196 births; 93 deaths of females outnumbered by one the births of girls (92). The week's record shows a decline in the number of deaths from epidemic disease. 65 of the deaths were of children under five years, 40 being of babies under one year. 51 of the deaths were of persons over 60, while 27 were over 70, seven over 80, and one over 90 years of age. 63 of the deaths occurred in hospitals and public institutions; five of these were of persons who had been admitted from localities outside the Dublin registration area.

The Queen's University of Belfast.

By the will of the late Mr. M. G. Megaw of London the sum of £1000 is given to the University of Belfast for the purpose of founding scholarships for the sons of farmers.

Infectious Disease in Belfast.

At a meeting of the Belfast public health committee held on Dec. 10th the medical officer of health drew attention to the fact that as compared with other populous centres a very small proportion of the cases of dangerous infectious disease was treated in hospital, notwithstanding the fact that the patients were without proper lodging or accommodation. The department looked to the medical practitioners to recommend cases occurring in their practice where there was not proper accommodation to go into hospital, as the department hesitated putting into force the powers conferred upon it by Section 141 of the Public Health Act; but in the interests of the general public it would be obliged to do so if there was not an improvement. It is really very amusing to hear this appeal made to the medical profession now, when the Ulster Medical Society some years ago sent a deputation to the public health committee objecting to the distance at which it was proposed to locate the fever hospital from the city of Belfast, and pointing out exactly what has since occurred—that the people, that is, the relatives of those ill, would object, owing to the great distance of the hospital (especially in case of their being summoned in an emergency) from the city of Belfast. All this was brought out at the Health Commission, but now the presence of fever cases in the city is frightening the authorities who apparently think by appealing to the profession whom they would not condescend to listen to formerly they may get their position strengthened.

Ulster Medical Society.

At a meeting of the Ulster Medical Society, held in the Medical Institute, Belfast, on Dec. 10th, Dr. T. S. Kirk, the President, being in the chair, Dr. John Campbell read a communication on Rupture of the Incarcerated Retroverted Gravid Uterus successfully treated, and showed a spleen successfully removed for extensive laceration due to injury. Mr. A. Fullerton read: (1) short notes of a case of Cancer of the Pylorus, treated by partial gastrectomy; (2) of a case of Kidney Tumour of suprarenal type; and (3) of a case of Calculus impacted in the ureter with somewhat unusual symptoms. Dr. W. Calwell showed: (1) a specimen of Gastro-colic Fistula which existed without symptoms; (2) a specimen of Calcareous Pleura; and (3) a specimen of Sarcoma of the Lung. Dr. G. A. Hicks showed: (1) a Hydatid Mole; and (2) a Gravid Fallopian Tube removed by operation from a case of repeated extra-uterine fœtation.

Enteric Fever in Londonderry.

There have been three deaths from this epidemic and 15 cases remain under treatment in Foyle Hill Hospital. It is said that the source of infection is the supply from one of the city cowsheds in which a milker had enteric fever. Complicating the outbreak has been a serious shortage of water, and for two days last week a large section of the city was entirely without water. During the great storm of October, the upper reservoir of water was injured, with the result that the water in the middle reservoir became polluted.

Dec. 15th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Treatment of Epilepsy.

AT the Hospitals Medical Society on Nov. 27th M. Roubinovitch stated that he had given to four epileptic patients subcutaneous or intramuscular injections of 10 cubic centimetres of cerebro-spinal fluid taken from other epileptics whose fits occurred much less frequently than did their own. Of these four two showed improvement. The fits of one patient were reduced in number from 18 or 20 to four in a month. The other had 60 or 70 fits a month; he was in a very bad state of health and, in fact, half comatose when the injections were commenced. Since Nov. 1st he had only had ten fits, his general condition has improved considerably, and he has partly recovered his intelligence. The two other epileptics who received this treatment only derived very slight and quite transitory benefit from it.

Rabies in Young Dogs.

M. Remlinger brought this subject to the notice of the Biological Society on Nov. 28th. Although rabies is always the result of infection from another rabid animal, and the incubation period is nearly always a long one, the disease occurs in very young animals, even when they are but a month or two old. Young puppies are, indeed, much more susceptible to rabies than are grown dogs. The incubation period is distinctly shorter, sometimes not more than a week. Puppies, too, are much more dangerous because when they bite they only seem to be playing. As a rule, the virulence of the organism is exalted in its passage through young dogs. When this reinforced virus is inoculated beneath the dura mater of the rabbit it at once becomes a "fixed virus." Hence arises the necessity of early intensive treatment in the case of a bite.

Cinnamate of Sodium in the Treatment of Pulmonary Tuberculosis.

M. Paul Reynier made a communication to the Academy of Medicine on Dec. 1st concerning the good results which

he has obtained by cinnamate of sodium in pulmonary tuberculosis. Both he and Dr. Buisson have used this drug in their clinics. It had been tried previously by Landerer of Stuttgart in intravenous injections of 25-milligramme doses, and in Spain better results have been got with larger doses. M. Reynier uses subcutaneous injections of 10 centigrammes dissolved in 10 cubic centimetres of physiological serum, prolonged over a certain period. In tuberculous patients submitted to this treatment the appetite and nutrition and strength improve, the fever becomes less, the cough clears up, and progressive cicatrisation of the lesions is promoted. M. Reynier warmly recommends a trial of the drug.

The Academy of Medicine.

The Academy of Medicine at the same meeting by 77 out of 81 votes elected Dr. Letulle to the section of pathological anatomy in the place unhappily left vacant by the death of Professor Cornil. Dr. Letulle, who is a physician of the Boucicaut Hospital and an *agrégé* of the faculty, was one of Professor Cornil's most brilliant pupils. He was secretary-general of the International Congress of Tuberculosis.

The Value of Œsophagoscopy in Cases of Cicatricial Stenosis.

At the Paris Hospital Internes' Society M. Suisez showed recently a series of patients suffering from cicatricial stenosis caused by swallowing caustic fluids. All were impermeable to ordinary bougies. Six had undergone gastrostomy and the others were just going to have that operation performed. Not even liquid food could be swallowed. By means of œsophagoscopy in all these cases it proved easy to find the narrow lumen, which was often situated eccentrically, and to pass a filiform bougie, then either by simple dilatation with progressively larger bougies or by the use of a circular electrode, to restore the calibre of the œsophagus gradually to nearly its normal size. All these patients are now able to feed themselves and the gastric fistulæ have been allowed to close up.

The Treatment of Cancerous Diseases by Fulguration.

At the Paris Society of Medicine M. de Keating-Hart expounded his method, which is a combination of a powerful high-frequency current with excision of the affected parts.[1] This surgical intervention in the cases shown dealt only with the macroscopic lesions, and its incompleteness affords a proof of the specific activity of the rays which remove that portion of the growth which cannot be seen. The technique is by no means simple, which accounts for numerous failures. On the other hand, the favourable results are increasing, as was proved by the patients shown at the demonstration.

The Indications for Inferior Tracheo-bronchoscopy.

At the meeting of the Paris Society of Medicine M. Cauzard read a paper upon this subject. Inferior tracheo-bronchoscopy is that form in which the instrument is introduced through a tracheotomy wound. It is true that this method has the disadvantage of requiring a tracheotomy wound; but, on the other hand, it has the following advantages over the bronchoscopy per the larynx. It permits of the introduction of a larger tube, of easier manipulations, and of the use of larger forceps and other instruments. M. Cauzard referred to two cases, the one occurring in the practice of M. Variot and M. Cuisez, and the other in his own. In both patients a bean had become impacted in the bronchus and could not be removed by bronchoscopy through the mouth and larynx (*bronchoscopie supérieure*) and in both cases there was no time to do a second operation after tracheotomy. M. Cauzard drew the moral that in cases of impaction of beans and other bodies which become soft and pasty tracheotomy and inferior bronchoscopy should be the operation performed from the first.

Dec. 14th.

ITALY.

(FROM OUR OWN CORRESPONDENT.)

Hospital Service.

INTERNATIONAL congresses of professors and practitioners of the healing art have many attractions for those who frequent them—not the least of these being the insight which they afford into the management and service of the hospitals characteristic of the country in which the congresses are held. Italian physicians and surgeons have been heard to say that when such an occasion takes them to the British Isles they have, *inter alia*, been specially interested in the economy, equipment, and general efficiency of the great charitable institutions in which disease or injury is gratuitously treated; interested not only in the professional skill of the clinical, but also in that of the subordinate *personnel*—to wit, the nurses and the assistant staff in general—organised in the patients' service. Not only so, but the air of comfort, even of good cheer, pervading the wards, coincident with a cleanliness, a tidiness, a diffused sense of the "becoming" (Plato's τὸ πρέπον), are coefficients all making for recovery or cure; the *ensemble* in itself constituting an object-lesson amounting to an admonition which the foreign, particularly the Italian, visitor may well profit by. Italy indeed has much leeway to make up before her "ospedali," even in her great centres of population, can court comparison with the humblest infirmaries or hospitals in the British Isles. Not that she is behindhand in the clinical, or purely professional, side; but in the subordinate *personnel* just referred to, above all in the assistant staff on which the physician or surgeon must rely—to say nothing of the features of comfort and cleanliness already noted—she is lamentably defective. A great congress has lately been held at Siena to discuss and to formulate the innovations required to remedy this state of things—a "Congresso degli Infermieri" (hospital "helps"), the second of a series which, I fear, bids fair to be an extended one before the desired consummation is brought about. Inadequate in number and miserably underpaid these "infermieri" complain that there is no attraction for duly qualified aspirants to join their ranks, their remuneration being barely enough to keep soul and body together, with absolutely nothing on which to support a family or to provide for old age or supersession by illness. In terms urgent in tone and even pathetic in language they call upon the Government to take prompt and practical cognisance of their circumstances; and they remind the Premier, Signor Giolletti, and his administration of the promises obtained from them by Signori Barzilai and Turati that 1909 would see them placed in conditions under which they could live and thrive in their honourable service. Failing this reform, they admonish the Government that a resignation of the "infermieri" *en masse* throughout the whole country must surely follow. Seldom has a better justified appeal been made to Parliament. Indeed, the lay journals are supporting it, not only in the interests of the public but to avert what threatens to become a national scandal. Hardly a week passes without painful incidents being made *publici juris* as to the *vie intime* even of the metropolitan hospitals—in which deeds of violence, mutiny, flight of patients from the wards bear testimony all too eloquent to the deficiency of the "infirmieri" in point of number and competence. In Rome on the same day occurred two such scenes—one in the Policlinico, another in the Santo Spirito—as would of themselves suffice to hasten and to give lasting effect to the appeal of the Siena Congress. In the former a surgical patient, a married man with a family, received a visit from a girl with whom he had been on terms of improper intimacy. At once they exchanged heated language, followed by the girl's wounding the patient near the left scapula with a stiletto. The man promptly seized the weapon, leaped out of bed, and dealt a violent blow at the girl who fell wounded in the abdomen. Her cries brought the "infermieri" to the spot, followed by the surgeon on duty—the patients in the ward meanwhile drawing their coverlets over their heads in horror at the spectacle. Both assailant and assailed were put under special treatment not an instant too soon, the result of which has yet to be made known. In the latter hospital, the Santo Spirito, there was a mutiny of the patients, beginning with one of these launching a cup in the face of a nurse (because the bread which she handed to him was not to his liking) and inflicting a deep wound in the left parietal region. This outrage was followed by another in the consumptive wards where a patient (having managed clandestinely to get wine) began, in his excitement, to denounce vociferously the whole *personnel* of the hospital where, he said, the victims to tuberculosis were maltreated. Protesting that he would go out, he was conducted to the isolation hall when, swinging an iron bar, *en route*, he swore he would break the head of anyone who came near him. He then called on other patients to join him, and several of these, laying hold of any weapon that seemed handy, threatened

[1] THE LANCET, Nov. 14th, 1908, p. 1436.

the lives of the "infermieri" on duty. The mutiny was not suppressed till the police intervened, one of whom had to spend the night with the ringleader who continued, from the bed to which he was strapped down, to load him with every sort of insulting epithet. Incidents of this kind, as I have said, are of scandalously frequent occurrence, varied from time to time by the flight of dangerous lunatics, after (as often as not) homicidal assaults on the *personnel* of the asylum. Italy holds too conspicuous a place in the European State system not to use every endeavour to bring her charitable institutions up to the standard of her more favoured sisters—institutions which, by their very character, ought to be models of peace, of decorum, and of safety.

The Chamber of Deputies has just been debating on the defects or abuses above noted—taking special cognisance of the sanitary and medical surveillance of the State prisons. Signor Romussi, an able and accomplished Milanese representative, drew attention to the fact that inadequate *personnel* is a prominent factor in the disturbances that have recently characterised prison life, where the conditions all round, including the viands served out, are such as to make the lives of the inmates intolerable, with the result that in Milan alone the last 13 months have witnessed 19 suicides, effective or abortive, among the "detenuti." The local prison has but one medical officer for 1100 convicts and 77 guardians, and this officer is expected to treat all their ailments, to examine them clinically on arrival and departure, with no other help than some casual "infermieri," two of whom are themselves convicts. The medicaments at his disposal are few and antiquated, the list being confined to magnesia, castor oil, and "vaselina borica," for all the ailments under treatment and as "rimedi generali." The same deficiency is found in the surgical department, there being no "sala d'operazione" (operating room) whatever, and instruments and appliances, when wanted, having to be brought from the Ospedale Maggiore! A commission composed of medical men and Members of Parliament is loudly called for, if only to retrieve the good name of Italy throughout Christendom as a leading European Power.

Dec. 6th.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

Restricting the Sale of Patent Medicines in Canada.

IT has been ordained by the Dominion Government that the federal law passed at the last session of the Canadian Parliament will come into force on April 1st, 1909. This Proprietary Medicine Act will prohibit absolutely the sale of patent medicines which contain cocaine or any of its salts and preparations. With regard to other drugs, such as morphine, opium, and so on, the sale may be made but under very close restrictions. Every manufacturer, importer, or agent must see to it that when the medicine is sold there is printed conspicuously on the bottle or label or box a formula setting forth the drugs contained, the amount, and the name and address of the vendor. There is, however, an alternative to this procedure. The manufacturer may transmit directly to the Department of Inland Revenue at Ottawa the formula showing what ingredients are contained therein and obtain from it a certificate to the effect that the preparation does not contain such a proportion of the drug as to be injurious to health. The use of the certificate as bearing on the merits of the preparation is forbidden and a penalty is provided. Before the Act comes into force the 3000 druggists in Canada must register their businesses with the Department of Inland Revenue and also the formula for each preparation which they put up. Almost every druggist in Canada puts forth a preparation or preparations of his own, and this means that he must either publish the formula of all on each parcel or submit and register it in the Inland Revenue Department of the Canadian Government. All druggists manufacturing a patent medicine must obtain from the Department Inland Revenue stamps, and if they sell any of their preparations without one of these selfsame stamps affixed thereto the penalty for the first offence will be $50.

The Experience of the Hospital for Sick Children, Toronto, in Broncho-pneumonia.

Dr. C. S. McVicar, of the Hospital for Sick Children, Toronto, reports the experience of that institution in the past seven years with broncho-pneumonia, in the November issue of the *Dominion Medical Monthly*. During those years 75 cases were admitted to the medical wards of the institution: primary, 64; secondary, 11. The deaths from the former were 25, 39 per cent.; from the latter 8, 73 per cent. 38 per cent. of the cases occurred in winter, 25 per cent. in spring, 24 per cent. in autumn, and 13 per cent. in summer, the month of greatest incidence being February. The character of the temperature was remittent in 56, or 75 per cent.; continuous in 19, or 25 per cent. In 42 cases with recovery, decline was by lysis in 29 cases, or 69 per cent.; by crisis in 13, or 31 per cent. Cough was present in 75 cases; cyanosis was noted in 61 cases, or 80 per cent. In 39 primary cases with recovery the average maximum temperature was 104° F.; average maximum pulse, 153; average maximum respiration, 58. In 25 primary cases with death these ranged as follows: 104°, 161, 68. From the experience of this hospital it is inferred that the increased respiration-rate is the most serious feature in determining the prognosis. In the whole series of 75 cases the temperature rose above 106° in four cases—three with death and one with recovery. Eight cases with recovery were treated without stimulation or local application of any sort. 18 cases with recovery were treated without stimulation. Antipyretic drugs were used in five cases, of which two died and three recovered. Hydrotherapy has proved of the greatest value. The child was always given as much fluid by the mouth as he or she would take. The hot pack was found to be the best external means of controlling nervous symptoms and it seldom failed to keep the temperature within bounds. Cold packs and cold sponging are not to be recommended as they are distressing to the patient. Local applications of any kind did not seem to be of any benefit. For cardio-vascular distress strychnine and whisky were used in 57 cases. The whisky seemed to exert the greatest benefit because of its action as a cerebral sedative. No benefit could be put down to the use of expectorants. Belladonna or atropine was used in nine cases; no results ensued except in three cases, as an anti-spasmodic in cough. Oxygen was used in 19 cases, 10 of which were fatal. In the nine cases with recovery the severity of the cases is shown by the average maximum temperature, pulse, and respiration as follows: 104°, 163, 64. Dr. McVicar gives it as his opinion from his experience that oxygen inhalations are more useful than any other treatment in this disease.

Special Meeting of Ontario Medical Council.

There was held during the month of November in Toronto a special meeting of the Ontario Medical Council called to consider and to advance in the matriculation standard the question of inter-provincial reciprocity, the question of reciprocity with Great Britain, and as well the question for erasing from the Register the names of certain members of the College who had recently been before the Ontario courts for alleged criminal practices. The Council affirmed its opinion in inter-provincial reciprocity to this extent, that wherever a similar high standard existed as in Ontario reciprocal relations might be entered into. As regards reciprocity with Great Britain it did not at the present time see its way clear to establish that condition of affairs. The percentages for passing its examinations were raised but the matriculation examination will remain as at present, although in the near future it will most likely be raised to the standard of senior matriculation in the universities. Regarding the charges of unprofessional conduct brought against practitioners it was thought wise in view of the fact that one case has not yet been finally disposed of by the courts that no steps should be taken in the matter at the present time. One outcome, however, of this is a circular letter addressed by the Council's prosecutor to the county attorneys throughout the province requesting that wherever Members of the College of Physicians and Surgeons are before the courts charged with unprofessional conduct in respect of criminal practices the Council should be advised of the same promptly.

Tuberculosis Exhibition in Montreal.

Montreal is just closing a most successful tuberculosis exhibition which opened in that city on Nov. 18th. The opening ceremonies took place with Sir George Drummond presiding. The Mayor of Montreal delivered an address of welcome; the Hon. Mr. Gouin, Premier of Quebec, did likewise for the province of Quebec. Professor J. George Adami and Dr. E. P. Lachapelle introduced the Governor-General,

Earl Grey, who declared the exhibition open. Amongst others who have delivered addresses were Dr. Herman Biggs, New York; Dr. Knopf, New York; Dr. Charles A. Hodgetts, of the Ontario Board of Health, Toronto; Dr. A. J. Richer, of the Ste. Agathe Sanatorium, near Montreal; Professor Adami and Dr. W. F. Hamilton. Lieutenant-Colonel Burland of Montreal has given $50,000 for a dispensary. Dr. Hamilton thus summed up the needs for the anti-tuberculosis campaign in Montreal: A larger dispensary, soon to be realised through the gifts of Colonel Burland; a quinquennial census of the city; a larger number of nurses; two more inspectors; greater support by the board of health with increased powers; fuller coöperation by the hospitals; a sanatorium in the Laurentian mountains and camps near Montreal; home for incurable cases, with farm attached to accommodate 400 patients; better enforcement of the laws against spitting and the requirement of notification and registration of tuberculous cases. Dr. Hamilton, in his public lecture before the exhibition, told of the work which had been done in Montreal during the past six years. Up to March last 1105 patients have been under supervision during the existence of the Montreal League for the Prevention of Tuberculosis. In the same period 4186 persons have died in Montreal from tuberculosis. 20,000 visits were paid to these 1105 patients, 9000 cuspidors were distributed, 40,000 leaflets were put forth, and 3000 rooms and houses were disinfected. All the work had been done on an expenditure of $12,724.

University of Toronto.

Dr. R. A. Reeve, Dean of the Medical Department of the University of Toronto for the past 12 years, has retired and has been succeeded by Dr. Charles K. Clarke, superintendent of the Toronto Provincial Hospital for the Insane. During his tenure of office Dr. Reeve took a very active interest in all that pertained to the medical department as well as to the wider field of university affairs. He was ever zealous in the cause of the medical students. He was for years President of the Alumni Association of the University, and during the meeting of the British Medical Association in Toronto in 1906 was its President. His valuable experience and services will not be lost to the medical department as he retains his position as professor of ophthalmology, being also chief of that department in the Toronto General Hospital.

Health Report of Ontario for October.

During the month of October there were 500 cases of enteric fever in this province with 126 deaths, compared with 50 deaths for the corresponding month last year. 50 cases of small-pox were reported occurring in 15 centres. The total number of deaths from all causes throughout the province was 2327, making a death-rate of 13·8 per 1000.

Hospital News in Toronto.

The Western Hospital, Toronto, recently received a donation of $25,000 from a citizen of that town. A by-law will be voted on in Toronto at the municipal elections in Jan. 1st, 1909, to provide for the raising of $200,000 to be divided equally between the Toronto General, St. Michael's, Grace, and the Western Hospitals. Dr. D. J. Gibb Wishart, Toronto, has been advanced to the position of chief of the ear, nose, and throat service in the Toronto General Hospital. Mr. I. H. Cameron, LL.D., has been appointed chief of the surgical service in St. Michael's Hospital and Dr. Walter McKeown, chief of another surgical service in the same institution. Dr. H. B. Anderson and Dr. R. J. Dwyer have been made chiefs of the two services in medicine. Dr. F. Fenton is chief of the obstetric service and Dr. G. H. Burnham of the ophthalmology service. Dr. J. N. E. Brown, superintendent of the Toronto General Hospital, is recommending to the board of governors that all "drunks" should be excluded from that institution in the future. Chronic "drunks" should go to the gaol and acute cases to the Provincial Hospital for the Insane until recovered.

Toronto, Dec. 1st.

THE TRURO TOWN COUNCIL AND THE LOCAL GOVERNMENT BOARD.—At a meeting of the Truro town council, held on Dec. 8th, it was decided to acquiesce in the Local Government Board's suggestion that the office of surveyor and sanitary inspector should be held by two persons, instead of by one as hitherto.

Obituary.

CHARLES EDWARD BEEVOR, M.D. LOND., M.R.C.S. ENG., F.R.C.P. LOND.,

PHYSICIAN TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC AND TO THE GREAT NORTHERN CENTRAL HOSPITAL, ETC.

IT is with sincere regret that the medical profession and a great number of personal friends have heard of the sudden death of Dr. C. E. Beevor in the early hours of Dec. 5th, due to an attack consequent on an atheromatous condition of the coronary arteries.

Charles Edward Beevor was the eldest son of the late Charles Beevor, F.R.C.S., and Elizabeth, daughter of Thomas Burrell. Dr. Beevor was born in London in 1854 and was educated first at Blackheath Proprietary School and then at University College, London. He received his medical education at University College Hospital, becoming M.R.C.S. Eng. in 1878, M.B. Lond. in 1879, L.S.A. in 1880, M.D. Lond. in 1881, and M.R.C.P. Lond. early in 1882. In May, 1882, Dr. Beevor was studying at Vienna with Obersteiner and attended various clinics in that city, especially those dealing with the throat and the eye. From August, 1882, to May, 1893, his time was passed at Leipsic, at first with Cohnheim and then with Weigert, with whom he studied microscope technique and the methods of mounting and staining sections. Whilst at Leipsic the clinic of the neurologist Erb naturally attracted the close attention of Dr. Beevor, after which he repaired to Berlin where he divided his time between the various hospitals in that city. The celebrated teachers in Paris, including Charcot, Marie, and Déjerine, were attended at various times by Dr. Beevor, and it might be said that he spared no trouble or labour to fit himself by every means in his power for the prosecution of his studies.

In 1883 he became physician to the National Hospital for the Paralysed and Epileptic, Queen-square, a post which he retained to his death, as was also the case with the office of physician to the Great Northern Central Hospital which he obtained in 1885. He became a Fellow of the Royal College of Physicians of London in 1888. On his return from Germany in 1883 he was engaged for some four years with Sir Victor Horsley on an experimental research, the subject of which was the minute representation of movement in the cerebral cortex and in the internal capsule. Notwithstanding the convincing demonstration that Dr. David Ferrier had given at the International Medical Congress held in London in 1881, that certain areas of the cortex were definitely related to certain motor and sensory functions, opinion still remained to a certain extent unstable with regard to the fundamental question of cerebral localisation, and this research was of far-reaching importance, not only because it led to a vast increase in our knowledge of the functions of the brain, but also because it had the effect of crystallising in the minds of the profession the truths of cerebral localisation. From the date of the publication of this work Dr. Beevor became one of the recognised neurological authorities of the country.

Last May he went to the United States in response to a pressing and special invitation from the neurologists of that country. He lectured in Philadelphia, New York, and Chicago. He received a most enthusiastic reception from the American Neurological Society and from the Neurological Section of the American Medical Association. Letters received from the United States by one of our correspondents in this country showed how deep an impression his visit had made and how greatly his personal charm and profound knowledge had impressed American neurologists. The lecture which attracted most attention in America was delivered before the members of the Section on Nervous and Mental Diseases of the fifty-ninth annual session of the American Medical Association held at Chicago; the subject of the lecture was the Coördination of Single Muscular Movements in the Central Nervous System. He was also the honoured guest of the Neurological Society of America before whom he read a paper on the Arterial Supply of the Brain. At Boston the medical profession induced him to address them on Localisation of Brain Centres and accorded to him a welcome that was as cordial as it was sincere.

Dr. Beevor contributed many articles to *Brain* and the leading medical journals, his "Handbook on Diseases of the Nervous System" being characterised by such depth of insight and such marked literary ability that the work showed the author to be not only master of his

specialty but also widely read in the various branches of his profession. His scientific contributions to the various medical societies gained for him the esteem and regard of the leading men in neurology and allied branches, so that all who knew him felt that it was an honour well deserved when he was elected president of the Neurological Section of the Royal Society of Medicine, an office that he filled with distinction and dignity, alas, for so very short a time. The Medical Society also was glad to bestow office and honours on him, for he was Lettsomian lecturer in their last session and worthily upheld the great traditions of that post. He was also intimately connected with the internal economy of that society as one of their trustees. At the commencement of the last meeting of the members the President, Mr. C. B. Lockwood, in an eloquent appreciation of Dr. Beevor's services, pointed out that not only was he trustee for the real estate of the Medical Society of London but had been also one of their honorary secretaries, and was known personally to almost all their members. Mr. Lockwood, speaking as one who had been for many years one of Dr. Beevor's colleagues at the Great Northern Central Hospital, found it unnecessary to speak of Dr. Beevor's professional distinctions, but bore eloquent testimony to his qualities as a courteous, pleasant colleague or friend, and as a man who performed all the duties which he undertook in a most painstaking manner, sympathetic words which admirably expressed the feelings of those present.

In addition to the distinctions mentioned, Dr. Beevor was Croonian lecturer to the Royal College of Physicians of London in 1903, when he took as his subject Muscular Movements and their Representation in the Central Nervous System.[1] One of the most remarkable and valuable of the many contributions to medical literature by Dr. Beevor was his work on the distribution of the different arteries supplying the brain published in the Philosophical Transactions of the Royal Society of London of this year. This work was undertaken to ascertain the area of distribution of the different arteries of the brain, when they were injected simultaneously under the same pressure with gelatin containing soluble colours in place of the usual method of injecting the arteries singly and successively with insoluble colours held in suspension. He succeeded in the difficult task of injecting simultaneously five arteries of the brain on the same side—viz., the anterior, middle, and posterior cerebrals, the anterior choroidal, and the posterior communicating arteries—with naphthol green, carmine, Nicholson's blue, acridin yellow, and Bismarck brown respectively. The method employed gave such exact results and a differentiation so definite that Dr. Beevor was able by means of coronal sections to show that the corpus subthalamicum (Luy's body) had a double arterial supply sometimes, its superior external part being injected by the posterior communicating artery, while its internal inferior part was injected by the posterior cerebral artery. The fact, therefore, that so small a body as the corpus subthalamicum can receive its blood-supply from two different arteries is against the theory hitherto advanced that the arrangement of the blood-supply has a functional significance, as Dr. Beevor's investigation shows the blood-supply to be purely anatomical and not distributed according to the physiological action of the part. By this method Dr. Beevor exactly determined the blood-supply to the different parts of the corpus callosum, especially of its posterior constituents, and by experiment the direction of the flow of blood in the posterior communicating artery has been found to be from the carotid to the posterior cerebral artery. To sum up the value of this work of Dr. Beevor very briefly, it may be said that until his work was published there was no book which gave a description of the arterial supply to all parts of the brain. The accurate knowledge of the area of supply of any particular artery is not only of importance from the point of view of anatomy but it is also of great value from the pathological side, as it is necessary to know for the purposes of diagnosing disease the exact portion of the brain which is liable to undergo softening when any particular artery is blocked by a clot of blood.

In his private life Dr. Beevor gained the affection and esteem of all who knew him, and his musical gifts and artistic abilities rendered him as popular as he was beloved for his amiability and gentleness. He leaves a widow, a son, and a daughter to mourn their loss, and to them in their bereavement we tender our sympathy, hoping that the knowledge that this brief record of the life and work of a good and learned man summarises the feelings of all his friends and fellow-workers will do something to lessen their pain.

"C. A. B.," a friend and colleague, writes the following graceful appreciation: "Charles Beevor is dead, dead ere his prime, and I mourn the loss of a dear and steadfast friend and colleague. I have known him intimately for 25 years, ever since, indeed, he was engaged in an experimental research with Horsley on the minute representation of movement in the cerebral cortex and internal capsule. From that time till the day of his death he was working hard and patiently on various problems connected with that special department of medicine to which he had devoted his life. Only recently the Royal Society has published a beautiful monograph by Beevor on the arterial supply of the brain, and if ever its Fellowship is awarded to a dead man it should be given to my dead friend. On Wednesday last I was dining in Beevor's company. He accompanied me home. His bright and kindly talk about his colleagues and their work, combined with quaint touches of humour, were a delight, and I shall never forget that evening with him. His death to me is an irreparable loss. Beevor's character was singularly winning and attractive. Sweet, simple, guileless, unselfish, retiring, and affectionate; none who knew him as I did could help loving him. No breath of slander ever passed his lips. His mind and thoughts were white and clean as those of a child. He never uttered an unkind word. It is most difficult to convey in words an adequate idea of the simplicity and beauty of Beevor's life. Perhaps in this endeavour I may detach and adapt a few lines from a beautiful poem by Macaulay. The fairy queens that ruled the life of Beevor were not the busy elves—gain, fashion, pleasure, power—

> 'to whose domain
> Belongs the nether sphere, the fleeting hour.'

He let them go—

> 'Without one envious sigh, one anxious scheme.'

> 'But, when those wayward sprites had passed away,
> Came One, the last, the mightiest, and the best.
> That glorious lady, with the eyes of light
> And laurels clustering round her lofty brow.'

> 'Fortune, that lays in sport the mighty low,
> Age, that to penance turns the joys of youth,
> Shall leave untouched the gifts which she bestows,
> The *sense of beauty* and the *thirst of truth*.'

That glorious spirit who bestows these gifts ruled Beevor's life. He—

> 'through all change
> Fixed his firm gaze on virtue and on her.'"

JOHN DAVID HILLIS, F.R.C.S. IREL., M.R.C.P. & L.M. IREL.

Mr. J. D. Hillis, who was one of the most popular and highly respected of Dublin suburban practitioners, died suddenly and quite unexpectedly on Dec. 8th, at his residence, 10, Leinster-square. Up to the hour of the fatal attack of "failure of the heart" the deceased gentleman was actively engaged in his professional duties. He was of English birth and parentage but received his professional education at the School of Surgery of the Royal College of Surgeons in Ireland, of which corporation he became a Licentiate in 1867. In the same year he received the diplomas of Licentiate and Licentiate in Midwifery of the (King and Queen's, now) Royal College of Physicians of Ireland. He secured an appointment soon after obtaining these qualifications in the Government Medical Service, British Guiana. His sojourn in Demerara in charge of a lepers' hospital gave him rare opportunities of observing a loathsome—and still decidedly mysterious—disease. One of the special results was the production of a volume, after retiring from the Government service and obtaining a pension, bearing the title, "Leprosy in British Guiana: An Account of West Indian Leprosy." It was published in 1881, after its author had settled in Dublin. It is illustrated by 20 lithographic plates and gives one of the most graphic accounts of the disease which have hitherto appeared in the English language. The continuation of his interest in the subject

[1] THE LANCET, June 20th (p. 1715) and 27th (p. 1783), 1903.

was shown in recent years by his vigorous opposition to the "fish hypothesis" of Sir Jonathan Hutchinson. The absolute non-existence of the disease in Catholic Ireland, along the borders of which badly kept and badly cooked fish are so largely consumed, gave him a strong weapon of controversy ready to hand. His general and specialised activities were shown by work as physician to the Dublin Throat and Ear Hospital, and papers on Lesions of the Throat in Leprosy and Tuberculous Laryngitis. He was an ex-vice-president of the British Laryngological Society and his high attainments in general culture procured his election to membership of the Royal Irish Academy—a body which severely scrutinises the attainments of medical men. Mr. Hillis was twice married and leaves a widow (and two families) to deplore their loss.

HUGH MAYER MONTGOMERIE, M.D., C.M. EDIN.,

SENIOR PHYSICIAN, WEST CORNWALL DISPENSARY AND INFIRMARY, PENZANCE.

Dr. Hugh Mayer Montgomerie died at his residence, 5, Clarence-place, Penzance, on Dec. 12th, from angina pectoris in his forty-fifth year. The deceased was the only son of Dr. James Barclay Montgomerie and was educated at Winchester School. He received his medical education at the University of Edinburgh, graduating M.B. and C.M. in 1887, and two years later he obtained the M.D. He also studied at St. Bartholomew's Hospital, London, and at Vienna, Prague, and Paris. Dr. Montgomerie shortly after graduating commenced practice at Penzance and was elected on the honorary staff of the West Cornwall Dispensary and Infirmary, following his grandfather and father, who were both members of the honorary medical staff of that institution. He was sole physician to the dispensary for 19 years and since the rebuilding of the institution he has been the senior physician. Dr. Montgomerie was a member of the Penzance Antiquarian Society, being the secretary from 1897 to 1900, and he became President the following year. In 1898 he was the President of the South-Western Branch of the British Medical Association. He was a good sportsman, a great football player in his younger days, and at one time he was an all-the-year-round bather. Dr. Montgomerie was extremely popular and highly respected in Penzance and the news of his sudden death was received with sincere regret by all classes, but particularly by the poor to whom he was most generous. The greatest sympathy is felt in Penzance and the district with his aged father and mother.

JAMES HARRISON, M.R.C.S. ENG., L.R.C.P. EDIN.

THE death occurred at East Grinstead, Sussex, on Dec. 13th, after an illness extending over a few days only, of Mr. James Harrison, Warden of Sackville College, to which he was appointed in 1893. Educated at Rossall School, the Owens College, the London Hospital, and Edinburgh, he took the L.R.C.P. Edin. diploma in 1881, and in the same year became M.R.C.S. Eng. For a time he was senior house surgeon at the Manchester Royal Infirmary and proceeded from there to Devonport, where he was for a number of years medical attendant to His Royal Highness the Duke of Edinburgh and his household and also assistant surgeon at the Royal Albert Hospital, Devonport. He was also a Fellow of the Royal Institute of Public Health. At East Grinstead Mr. Harrison was very popular. He held a large number of public appointments, including the post of medical officer of the High Grove Sanatorium, while his private practice not only in the town but in a large area around was a large one. His demise at a comparatively early age is deeply regretted. He was a prominent Freemason, having been Worshipful Master of the Sackville Lodge at East Grinstead in 1900, and was given provincial honours four years later.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Geisthövel, chief of the Franciscus Hospital, from blood poisoning contracted in the course of his duties.—Dr. B. L. Billet, formerly *medecin-inspecteur* in the French Military Medical Service.—Dr. M. N. Popoff, professor of nervous and mental diseases in the University of Tomsk.—Dr. D. I. Kurayeff, extraordinary professor of medical chemistry in the University of Kharkoff.—Dr. Béla Weiss of Vienna, an author of considerable repute in literary circles and formerly editor of the *Wiener Medizinische Presse*, aged 70 years.—Dr. Dudon, formerly surgeon to the Bordeaux hospitals.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At an ordinary meeting of the Council of the Royal College of Surgeons on Dec. 10th the diploma of Fellow was conferred upon 28 gentlemen who passed the Final Examination which was held on Nov. 20th, 23rd, 24th, 25th, 26th, and 27th and for which 68 candidates presented themselves. The following are the names of the successful candidates:—

Hermann Balean, M.D., B.S. Lond., L.R.C.P., M.R.C.S., London Hospital; John McCallum Anderson Macmillan, Captain I.M.S. M.B. Edin., L.R.C.P., M.R.C.S., Edinburgh University and St. Bartholomew's Hospital; Robert Ainslie Ross, M.B., Ch.B. Edin., L.R.C.P., M.R.C.S., Edinburgh University and St. Thomas's Hospital; William Haywood Hamilton, Captain I.M.S., L.R.C.P., M.R.C.S., St. Bartholomew's Hospital; Athelstan Jasper Blaxland, M.B., B.S. Lond., L.R.C.P., M.R.C.S., University College Hospital; George Herbert Colt, M.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., Cambridge University and St. Bartholomew's Hospital; Albert William Duncan Coventon, M.A., B.C. Cantab., L.R.C.P., M.R.C.S., Cambridge University and St. Bartholomew's Hospital; William Harold Hey, M.B., Ch.B. Vict., L.R.C.P., M.R.C.S., Manchester University; Charles William Menelaus Hope, M.B., B.S. Durh., L.R.C.P., M.R.C.S., Durham University and St. Bartholomew's Hospital; James Elrick Adler, L.R.C.P., M.R.C.S., London Hospital; Walter Welchman, M.B., B.S. Lond., L.R.C.P., M.R.C.S., Guy's Hospital; Haldinstein David Davis, M.B. Oxon., M.R.C.P., M.R.C.S., Oxford University and St. Bartholomew's Hospital; Harold Beckwith Whitehouse, M.B., B.S. Lond., L.R.C.P., M.R.C.S., St. Thomas's Hospital and Birmingham University; John Jackson Whatley Evans, L.R.C.P., M.R.C.S., Westminster Hospital; William Stephen Fenwick, M.B., B.S., B.Sc. Lond., L.R.C.P., M.R.C.S., Charing Cross Hospital; Godfrey Martin Huggins, L.R.C.P., M.R.C.S., St. Thomas's Hospital; Kenneth Macfarlane Walker, B.A. Cantab., L.R.C.P., M.R.C.S., Cambridge University and St. Bartholomew's Hospital; William Elliott Carswell, M.B., Ch.B., New Zealand, L.R.C.P., M.R.C.S., New Zealand University and London Hospital; Henry John Nightingale, M.B., B.S. Lond., L.R.C.P., M.R.C.S., St. Thomas's Hospital; Andrew John Crawford, M.B., Ch.B., New Zealand, L.R.C.P., M.R.C.S., New Zealand University and London Hospital; Robert Joseph Willan, M.B., B.S. Durh., L.R.C.P., M.R.C.S., Durham University; George Henry Pooley, B.A. Cantab., L.R.C.P., M.R.C.S., L.S.A., F.R.C.S. Edin., Cambridge University, St. George's and St. Bartholomew's Hospitals; David McCrae Aitken, M.B., Ch.B., F.R.C.S. Edin., Edinburgh University and St. Thomas's Hospital; Percival Templeton Crymble, M.B., B.Ch., B.A.O. R.U.I., Queen's College, Belfast, and London Hospital; Bryden Glendining, M.B., B.S. Durh., Durham University and Guy's Hospital; Thomas Killen, B.A., M.B., B.Ch., B.A.O. R.U.I., Queen's College, Belfast, and London Hospital; John Ernest Payne, M.A., M.B., B.C. Cantab., Cambridge University and St. Bartholomew's Hospital; and Robert Townley Slinger, M.B., Ch.B. Vict., Manchester University and London Hospital.

The diploma of Member was conferred upon the following gentleman who has previously passed the Final Examination of the Conjoint Examining Board and has now complied with the by-laws:—

Robert William Walter Vaughan, Liverpool and University College Hospital.

Licences to practise Dental Surgery were conferred by the Council upon the undermentioned 33 gentlemen who have passed the resquisite examinations and complied with the by-laws of the College:—

Stammers Henry Alabaster, Charing Cross and Royal Dental Hospitals; Frederick George Hayward Armin, Charing Cross and Royal Dental Hospitals; Walter Pigott Barfoot, Charing Cross and Royal Dental Hospitals; Arthur Henry Bridges, Charing Cross and Royal Dental Hospitals; Stephen Wilson Charles, Guy's Hospital; Leonard Marshall Crockett, Charing Cross and Royal Dental Hospitals; George Leslie Curnock, Charing Cross and Royal Dental Hospitals; Norman Malcolm McArthur Douglas, Liverpool University; Max David Gillis, University of Munich and Royal Dental Hospital; Leonard Beard Griffin, Guy's Hospital; Louis François Guanziroli, Charing Cross and Royal Dental Hospitals; William Edwin Guilding, Guy's Hospital; Henry Hall, Charing Cross and Royal Dental Hospitals; John Percival Helliwell, Manchester University; Ernest Alfred Sebastian Hoare, Charing Cross and Royal Dental Hospitals; William Archer Hodgson, Guy's Hospital; Frederick Oscar Hume, Guy's Hospital; Newton James, Guy's Hospital; Frederic Butcher Kirkman, Liverpool University; William Stocks Lacey, Guy's Hospital; John Vollans Lambert, Leeds University, Middlesex and Royal Dental Hospitals; William Edward Southcomb May, Charing Cross and Royal Dental Hospitals; Harold Matthews Meek, Manchester University; Roland Thomas Pounds, Charing Cross and Royal Dental Hospitals; Henry Stanley Pugh, Guy's Hospital; Stanley Alfred Riddett, Middlesex and Royal Dental Hospitals; Edward Spencer Sampson, Charing Cross and Royal Dental Hospitals; Dudley Bayzand Tasker, Guy's Hospital; William Edgar Antonius Tibbalds, Guy's Hospital; Edgar Arthur Tomes,

Guy's Hospital; Samuel Lewis Tresidder, Middlesex and National Dental Hospitals; John Eric Wheeler, Charing Cross and Royal Dental Hospitals; and William Frederick Whiteley, Guy's Hospital.

FOREIGN UNIVERSITY INTELLIGENCE.—*Baltimore (Johns Hopkins University):* Dr. Joseph T. Smith has been appointed to the chair of Midwifery.—*Cincinnati:* Dr. Archibald Carson has been appointed Professor of Anatomy in succession to Dr. Oliver V. Holt.—*Cleveland (Western Reserve University):* Dr. Maulsby W. Blackmann has been appointed Lecturer on Histology.—*Jena:* The eminent professor of zoology, Dr. Ernst Haeckel, is resigning his chair which he has held for more than 40 years. He is making over to the university on the occasion of the 350th anniversary of its foundation his unique "Phylogenetic Museum." The collection of the materials for this has been his *magnum opus* and he proposes to employ his leisure after his retirement in completing it. His professorship is to be offered to Professor Lang of Zürich.—*Kharkoff:* Dr. V. Vosskresenski has been promoted to the chair of Operative Medicine.—*Kiel:* The title of Professor has been granted to Dr. H. Piper, *privat-docent* of Physiology.—*Munich:* Dr. John Seemann, formerly of Giessen, has been recognised as *privat-docent* of Physiology.—*Nantes:* Dr. M. Bureau, Professor of Therapeutics, has been transferred at his own request to the chair of Hygiene and Forensic Medicine in place of Dr. Mirallié.—*Odessa:* Dr. V. Voronin of Moscow has been appointed Extraordinary Professor of General Pathology.—*Paris:* Dr. Unna of Hamburg and Dr. Pick of Prague have been elected foreign corresponding members of the Academy of Medicine. Dr. Quénu, Professor of Surgical Operations and Appliances, has been transferred by his own request to the chair of Clinical Surgery and has been elected a member of the Academy of Medicine.—*Prague (Bohemian University):* The title of Extraordinary Professor has been granted to Dr. Karl Svehla, *privat-docent* of Children's Diseases, and to Dr. Wenzel Maty, *privat-docent* of Ophthalmology. *German University:* Dr. Karl Kreibich, Extraordinary Professor of Dermatology, has been promoted to an Ordinary Professorship.—*St. Petersburg (Women's Medical Institute):* Dr. L. T. Levin has been recognised as *privat-docent* of Laryngology and Otology.—*Vienna:* The College of Professors has at last decided to fill up the chair to which the Third Medical Clinic is attached, which has been vacant since the death of Professor Schrötter. Although several of the members were very anxious to obtain a colleague of Austrian nationality—such as Dr. von Jaksch of Prague, Dr. Oztner of Innsbruck, Dr. Chvostek or Dr. Pal of Vienna, whose names have been proposed—the final choice has fallen upon a non-Austrian, Dr. Adolf von Strümpell, now Professor of Medicine in the University of Breslau, who has accepted the invitation. He will not, however, take up his new duties until after the conclusion of the winter semester. At the Jubilee Hospital Dr. Linsmayer has been appointed Director, Dr. Pupovac *primararzt* of the Surgical Department, and Dr. Maresch prosector. Dr. Rudolf Maresch has been recognised as *privat-docent* of Pathological Anatomy.

INFRINGING THE PHARMACY ACT.—The Council of the Pharmaceutical Society of Great Britain proceeded against Mrs. R. J. Johnson, of High-street, Selsey, in the Chichester county court, on Dec. 8th, for an infringement of the Pharmacy Act. Mrs. Johnson traded under the name of "R. J. Johnson and Sons, photographic and dispensing chemists," while on the fanlight of her shop was "Roberts, Drug Stores." On Sept. 14th threepennyworth of paregoric was purchased and on being analysed was found to contain one grain of opium. The defendant was thus liable under the provisions of the Pharmacy Act, and, moreover, she was not registered as a member of the Pharmaceutical Society. The defence was that only a technical offence had been committed, that Mrs. Johnson did at one time employ a properly qualified chemist, but that latterly she had arranged with a gentleman living at Selsey to do her dispensing, not realising that by so doing she was infringing the law. The Pharmacy Act, however, is very clear: the person controlling the business, it says, must be duly qualified. His honour Judge Scully, in giving judgment for the Pharmaceutical Society for the amount claimed, namely £10—£5 for having kept open a shop for retailing, dispensing, or compounding a poison, and £5 for taking, using, and exhibiting the title of chemist, contrary to the provisions of the Pharmacy Act—said that the mischief which the Act was intended to remedy was very serious indeed, for it was a most dangerous thing to allow anyone who was not qualified to sell poisons which were often sold in the form of an elixir, mostly intended for the use of children. His honour allowed costs on the higher scale on the ground that the case was one of general public importance.

LONDON HOSPITAL MEDICAL CLUB.—The annual meeting of this club was held at the Café Royal on Dec. 11th. Dr. F. J. Smith, physician to the hospital, occupied the chair at the dinner which followed. The speeches were few and short and several of the guests favoured the company with music, songs, and short stories. The club is one of the oldest of the medical clubs in the metropolis and has now a benevolent fund in connexion with it.

LIVINGSTONE COLLEGE.—The annual report and statement of accounts, which were presented at the annual general meeting of the members of Livingstone College on Dec. 8th, were of a very satisfactory nature. Livingstone College gives elementary medical training to missionaries without reference to denominational or national prejudice. The number of students who entered during the past year is by far the largest on record, being an average of 30 for each of the three terms. The financial statement is particularly satisfactory, the year commencing with a deficiency of £404, which has all been paid off with the exception of £38, and in addition to the ordinary receipts a legacy of £50 has been placed to the capital account. The working expenses of the year have been practically met by the fees of students. Contributions are, however, still needed for the general fund or to pay off the mortgage of £3500 which still exists upon the property. Contributions will be gratefully acknowledged by the Principal, Dr. C. F. Harford, Livingstone College, Leyton, E.

MEDICAL AND DENTAL DEFENCE UNION OF SCOTLAND (LIMITED).—The annual general meeting of the union was held in Glasgow on Nov. 5th in the registered office. Sir Hector C. Cameron (Glasgow) occupied the chair and there was a large attendance of members. In moving the adoption of the annual report and statement of accounts the chairman remarked that the accounts disclosed more marked progress than in any previous year. He referred to the statement submitted by the council that a large proportion of threatened actions on being taken up by the union were departed from, and expressed the view that this illustrated the benefit of such an association. He pointed out that the number of claims against dentists by dissatisfied patients was more in proportion to relative numbers than in the case of medical men. The membership at the close of the previous year was 966, and 240 new members were admitted during the year under review, being an increase of one-fourth. The union had invested funds amounting to £1204 and the income for the year was £586, with an expenditure of only £270. Reference was made to the printed forms issued by the union for the use of practitioners, being an indemnity form to be granted by friends of patients in respect of lunacy certificates and an agreement for use between a practitioner and his assistant. The chairman commented upon the usefulness of these documents to members of the professions interested. Dr. J. Crawford Renton seconded the adoption of the report and statement of accounts and this was unanimously agreed to. Sir A. R. Simpson (Edinburgh), Professor W. Stephenson (Aberdeen), Sir Hector Cameron (Glasgow), and Professor J. A. C. Kynoch (Dundee), were re-elected presidents of the union, and a number of medical and dental practitioners were re-elected as vice-presidents. Dr. John Gordon (Aberdeen), Professor Kynoch, and Dr. G. Balfour Marshall (Glasgow) were unanimously re-elected as members of the central council. The present auditors were re-elected and the meeting closed with a vote of thanks to the chairman. The sixth annual report of the union prints a number of illustrative cases showing the varied manner in which advice and legal assistance have been afforded to its members. The value of such societies is shown in one sentence of this report, "but of the large number of cases presented to the council, involving the

possibility of action at law, ... only a comparatively small number have found their way into the courts." The name of the union has been found a powerful deterrent in threatened action for malpraxis.

DONATIONS AND BEQUESTS. — Mr. Matthew George Megaw has left £1000 to St. Bartholomew's Hospital for the building fund and £1000 to Guy's Hospital for general purposes. The late Mr. J. L. Perrin of Bristol has bequeathed £500 each to the following institutions: the Royal Ear Hospital, Soho, London; the Swansea General Hospital; Bristol General Hospital; Bristol Royal Infirmary; Bristol Dispensary; Bristol Eye Hospital; and Bristol Hospital for Women.

REUBEN HARVEY MEMORIAL PRIZE.—The ninth award of this triennial prize will be made on July 1st, 1909. The competition for the prize is open to all students of the various schools of medicine in Dublin which are recognised by the medical licensing bodies in Ireland and also to graduates or licentiates of these bodies of not more than three years' standing at the time of the award. The prize, value £25, will be awarded to the writer of the best essay, on a subject to be selected by the candidate, evidencing original research in animal physiology or pathology, the essay to be illustrated by drawings or preparations. The essays, bearing fictitious signatures, are to be lodged with the Registrar of the Royal College of Physicians, Kildare-street, Dublin, on or before June 1st, 1909.

THE INCORPORATED SOCIETY FOR THE DESTRUCTION OF VERMIN: THE QUESTION OF RAT VIRUS.—A meeting of the scientific committee of the Incorporated Society for the Destruction of Vermin, at which Dr. W. Collingridge, medical officer of health of the City of London, was present by invitation, convened to discuss the possible danger attending the use of rat virus, was held at the offices of the society, 95, Wigmore-street, W., on Dec. 10th. Sir Lauder Brunton presided and the following gentlemen were among those present: Dr. H. E. Annett, Dr. Louis W. Sambon, and Dr. F. M. Sandwith, also Mr. W. R. Boelter, Mr. Fletcher Barrett, Mr. F. V. Theobald, and Mr. A. E. Moore, secretary. It was resolved, on the motion of Sir Lauder Brunton, seconded by Dr. Sambon, that—

In view of the great importance of the matter to the public urgent representations be made to the Government that suitable experiments be instituted to determine whether the various bacteriological preparations used for the destruction of rats and mice are, or may be likely to become, capable of producing disease in man and domesticated animals.

LITERARY INTELLIGENCE.—Messrs. Baillière, Tindall, and Cox have been authorised on behalf of the Department of Education of the Soudan Government to undertake in future the issue of the reports of the Wellcome Research Laboratories at the Gordon Memorial College, Khartoum. Up to the present two volumes have been issued, covering a period from the foundation of these laboratories in 1903 to 1906. The third report will be issued at the beginning of next year, bringing the work up to 1908. The Soudan Department of Education has taken this step to meet the considerable demand for these reports which has arisen amongst medical men and other scientific workers interested in tropical research. Hitherto only a limited number of copies has been issued and these reports have been sent gratuitously to Government departments and to various medical, sanitary, and other institutions interested as well as to a few leading authorities on the subjects dealt with. The work of these laboratories has so far extended that the forthcoming third report will contain some 475 pages of detailed records of many interesting experiments and researches, principally connected with tropical medicine. The book will be illustrated and will include many coloured plates. Simultaneously with the third report, and as a supplement to it, will be issued a review of the progress made in tropical medicine during recent years, compiled by Dr. Andrew Balfour, director of the laboratories, and Dr. R. C. Archibald. The great cost of production of these reports, especially in their present voluminous dimensions, necessitates making a charge for them henceforth. The price fixed will be as moderate as is consistent with the cost of publication and any profit made on them will be devoted by the Soudan Department of Education to a special fund to be applied to future publications of the laboratories. All applications for current publications and for reprints of the first and second reports of the Wellcome Research Laboratories, Khartoum, should be addressed to Messrs. Baillière, Tindall, and Cox, London.

SOCIETY OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The annual meeting of the members of this society was held at Frascati's Restaurant on Dec. 8th. Expressions of regret were made at the continued opposition of the Council of the Royal College of Surgeons in refusing to accede to any of the repeated applications for more efficient representation and also pointing out that under the Midwifery, Factory, and Vaccination Acts, as well as the examinations of the Territorials, much better fees could have been obtained if the professional units could have relied upon the support of those who are pledged to do so. The officers were elected for the coming year and the funds were reported to be in a prosperous condition, notwithstanding the heavy expense of the poll of the members of the society caused by the recent action of the College. Several new members were elected and a hearty vote of thanks was accorded to Mr. Joseph Smith, J.P., for presiding during the past year.

RESEARCH DEFENCE SOCIETY.—A meeting was held on Dec. 11th, at St. William's College, York, under the chairmanship of Mr. W. F. H. Thompson, J.P., to inaugurate a York branch of the Research Defence Society. A large and representative company included the Hon. Mrs. Maclagan, the Dean and sub-Dean of York, Canon Argles, Canon Robinson, and many other clergymen. After the chairman had asked for an open-minded consideration of the case, Mr. Stephen Paget delivered an address in which he demonstrated the necessity to science of experiments on animals, using the arguments which we have published on previous similar occasions. Other speeches followed, which included two striking vindications of the experimental method by Canon Watson and the Dean of York. The latter said that "he was the chairman of a vivisection institution in that city, where vivisection was going on constantly and was going on that day. He meant the county hospital." With regard to Mr. Paget's remarks, the Dean said that "they had his statements on such testimony that they could not refuse to believe it. They could not believe that these men were palming off on them a quantity of fables that were untrue." Mr. W. Hood testified to the value of diphtheria antitoxin. The Rev. C. Owen and Mr. W. H. Jalland also spoke in favour of the society's aims. The Rev. J. Brighting and Miss Ansell put a certain number of hostile questions which were answered by Mr. Paget whom Miss Ansell is reported to have interrupted so frequently in the process that she had to be called to order by the chairman. Mr. H. V. Scott moved a vote of thanks to the lecturer and to the chairman, and Dr. P. Macdonald in seconding it remarked that at a recent lecture in York much had been made of the removal of the stomach and entrails of a dog. He knew a parallel case in which a somewhat similar rearrangement had been made in an "animal's" internal economy. That "animal" was a man whose life had been saved by the operation which had been done two years ago. He was likely to live to be an old man. This unanswerable illustration of the humane lessons to be learnt from animal experiment was warmly acclaimed by the audience. Dr. G. S. Hughes is the secretary of the new branch and we may remind our northern readers that the objects of the society are best served by recruiting non-medical members. It now numbers some 1800 persons.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Poisons and Pharmacy Bill.

THE Poisons and Pharmacy Bill has passed through its committee stage in one of the Standing Committees of the House of Commons. The principal alteration made in the measure was the adaptation of Clause 3 to embody the compromise between the pharmaceutical chemists and the drug store companies, which was explained by Mr. H. SAMUEL during the debate on the motion for the second reading of the Bill. The drug store companies under this arrangement must appoint a superintendent to manage the poisons department. There was some discussion on the clause to regulate the sale of certain poisonous substances for agricultural and horticultural purposes. An amendment was proposed to extend the regulations to "medical preparations containing any of the poisons from time to time comprised in Part II. of Schedule A to the

Pharmacy Act, 1868, provided that such preparations be sold in closed wrappers bearing in legible characters the name of a pharmaceutical chemist or of a chemist and druggist registered under the Pharmacy Act, 1868, as a compounder of the preparation." Mr. SAMUEL, who was in charge of the Bill, firmly refused to assent to any proposal which would allow those preparations to be sold by tradesmen all over the country. Accordingly the amendment was not accepted. On the motion of Mr. SAMUEL belladonna plasters were excepted from Part I. of the schedule.

The Fate of Bills.

Mr. ASQUITH in announcing the intentions of the Government on Wednesday, Dec. 9th, with regard to its programme for the remainder of the session, indicated the Bills which he hoped would be carried this year. Amongst these he mentioned the Poisons and Pharmacy Bill. However, if opposition to the Tuberculosis Prevention (Ireland) Bill developed more than was anticipated the Government would not take effective steps to press it through its remaining stages this session. The Housing and Town Planning Bill was not to be further advanced this session but the Prime Minister promised that it would be reintroduced at an early period of next session when its committee stage would be curtailed within as narrow dimensions as was reasonably possible.

Lotteries and Indecent Advertisements.

The Home Office has promised to introduce legislation next session on the subject of Lotteries and Indecent Advertisements.

The Housing and Town Planning Bill.

The order for the consideration on report of the Housing and Town Planning Bill has been discharged and the Bill withdrawn.

HOUSE OF COMMONS.

THURSDAY, DEC. 10TH.

The Analyst for County Cavan.

Mr. VINCENT KENNEDY asked the Chief Secretary to the Lord Lieutenant of Ireland to state who was the analyst for county Cavan, when he was appointed, where his laboratory was situated, what staff was employed there, for how many counties did he act as analyst, how many samples were submitted to him in the years 1905-06-07, how many of these samples did he personally analyse, and what was the total salary paid him, distinguishing the amount paid by county Cavan.—Mr. BIRRELL replied: The analyst for county Cavan is Sir Charles Cameron who was appointed in 1876. His laboratory is in Castle-street, Dublin, but I have no means of knowing what staff he employs in it. He acts as public analyst for 24 counties and the salary paid to him by county councils, including £60 from county Cavan, amounts to £1005. He also receives £385 per annum as analyst for eight boroughs. There is no official record of the number of samples submitted to him in 1905-06-07, but the county council might be able to supply the honourable Member with the information.

The Milk Bill.

Mr. COURTHOPE asked the President of the Local Government Board when the Milk Bill would be printed.—Mr. BURNS answered: It would not be practicable for the Bill to make any progress this year, and it will, I think, be best to defer its introduction until next session.

The Sanitary Condition of Tin Works.

Mr. JOHN WILLIAMS asked the Secretary of State for the Home Department whether his attention had been drawn to the badly ventilated and insanitary condition of nearly the whole of the tin works situate at Pontardulais, South Wales; and whether he was aware that the conditions under which work was carried on at those works were conducive to sickness, severe illness, and, in some cases, consumption; and whether, if such conditions existed, he would cause instructions to be given to the owners thereof to make the work and to carry out the improvements necessary for the preservation of the health of the workmen thereat.—Mr. GLADSTONE (by written answer) replied: I have no information as to any specific cases of illness at the works in question, but I am aware that, not only at these works but in tinplate works generally, the conditions as regards ventilation need considerable improvement, and the question of the best means to secure the removal of fumes and dust has been receiving special attention from the Factory Department. During the last three months a large number of works have been visited by the inspector and special inquiries made, and various experiments are now being carried out at different works. When the results of these experiments are known, the possibility of further action will be considered.

MONDAY, DEC. 14TH.

The Medical Inspector of Estates' Hospitals, British Guiana.

Sir HENRY COTTON asked the Under Secretary of State for the Colonies whether his attention had been drawn to the fact that the Governor of British Guiana did, by his casting vote against the almost unanimous objection of the elected members of the Combined Court of the Colony, decide, on Nov. 3rd last, on the abolition of the office of medical inspector of estates' hospitals; whether the salary of that office, which was instituted for the protection of Indian immigrants indentured for service on sugar plantations, was secured by the law of the colony; whether the Government of India had been consulted and had agreed to the abolition of this office; and whether the Secretary of State proposed to take any action in the matter.—Colonel SEELY replied: The facts stated in the first part of my honourable friend's question are generally correct, and the action of the Governor was in accordance with the law which expressly provides that he shall have both an original and a casting vote, but I may explain that if, as is proposed, the separate office of medical inspector is abolished, arrangements will be made for the efficient discharge of the duties hitherto attached to it, experience having shown that they are not sufficient to occupy the whole time of one officer. It has not in the circumstance been considered necessary to consult the Government of India. The law of the colony imposes no obligation to appoint a separate officer for the sole purpose of medical inspection, although it empowers the Governor to appoint such an officer at a salary not exceeding £1000 per annum. At the Governor's instance, the whole matter has been deferred for the present, pending further discussion in the Combined Court.

Quarantine Regulations in Spain.

Mr. M'ARTHUR asked the Secretary of State for Foreign Affairs whether his attention had been called to the periods for which vessels arriving in Spain from Liverpool had been detained in quarantine on account of recent cases of plague in Liverpool; whether he was aware that the detention had amounted to as much as 20 days, although the International Sanitary Convention of 1903 (to which all European countries, except Spain, Greece, and Norway, were parties) decided that a period of five days' quarantine, computed from the date of isolation of the last-known case of plague at the infected port, was sufficient; and whether he would make representations to the Government of Spain with a view of bringing the usage of that country into accord with that prevailing in other European countries, so as to minimise the loss and inconvenience to which British shipowners and merchants were subjected.—Mr. MCKINNON WOOD (on behalf of Sir EDWARD GREY) replied: The answer to the first part of the question is in the affirmative. I am not aware that detention in quarantine in Spanish ports has amounted to as much as 20 days. 12 days was the period fixed in the first instance by the Spanish Sanitary Regulations; but representations were made by His Majesty's Ambassador at Madrid and subsequently the Spanish Government gave free pratique to healthy vessels arriving from Liverpool, subject to certain reservations in accordance with the Venice Sanitary Convention to which Spain is a party. His Majesty's Government recognises the importance of securing uniformity and a common standard of regulations, as provided by the Paris Convention, and will do all in its power to facilitate its general application.

Christmas Gifts in the Hospitals of the Metropolitan Asylums Board.

Mr. MYER asked the President of the Local Government Board whether he was aware that subscription lists were presented to the nurses in the hospitals of the Metropolitan Asylums Board, whose salaries ranged from £24 to £25 per annum, soliciting subscriptions for Christmas gifts to the matron and assistant matron, and day and night sisters, and also that the nurses were expected to give presents to the day and night servants, to the nurses rooms' servants and the gate porters; and whether he would communicate with the Asylums Board immediately, so that notices might be posted before the ensuing Christmas, discountenancing the system of the receipt of gifts by any of their officials.—Mr. BURNS answered: I have communicated with the Asylums Board with regard to this matter, and I find that inquiries with regard to it have been made by them at all their hospitals. I understand that the replies received show that in the large majority of cases nothing of the kind mentioned in the question took place, but that in one instance the practice referred to appears to have prevailed, and that in two or three others there has been some such practice, although of a more limited and partial character. I am glad to say, however, that instructions were given on Saturday last to the medical superintendent in each of these cases to the effect that the practice should be discontinued forthwith.

TUESDAY, DEC. 15TH.

The Indian Medical Service.

Mr. KETTLE asked the Under Secretary of State for India whether he was aware of the difficulties in the path of capable Indians desirous of presenting themselves at the competitive examination for the Indian Medical Service held in England and of the disadvantages under which they were placed as compared with the people of this country; and what steps he proposed to take in order to remove these disabilities from the people of India and to afford them reasonable opportunities for rising in the medical service of their country. The honourable gentleman further asked whether the professors of the Medical College and the physicians and surgeons at the General Hospital, Madras, were military officers attached to the Indian Medical Service and lent to the civil authorities; whether medical gentlemen outside the ranks of this Service were debarred from filling those posts and were allowed to serve only in subordinate ranks; whether he was aware of the discontent amongst members of the subordinate service owing to their being shut off from the higher appointments for want of a commission in the army; and whether he proposed to make any recommendations to the Government of India on the subject.—Mr. BUCHANAN said in reply: Perhaps the honourable Member will permit me to answer his two questions together. The professors of the Medical College and the physicians and surgeons of the General Hospital, Madras, are at present officers of the Indian Medical Service, which is recruited for both military and civil duty. Medical officers outside that service are not shut off from higher appointments, although in practice they seldom attain the highest posts. The Secretary of State does not consider the present condition of the matter to be satisfactory and is in communication with the Government of India as to the desirability of promoting the growth of an independent medical profession in India and of extending the employment of civil medical practitioners recruited in India.

Medical Inspection of School Children.

Mr. GEORGE ROBERTS asked the President of the Board of Education whether steps had yet been taken to carry into effect the promise of his predecessor in office, made to a deputation from the County Councils' Association in February last, to give financial aid to local education authorities in respect of the cost of organising and carrying out medical inspection in schools; and, if so, whether he would state the nature of the proposals and when they would come into operation.—Mr. RUNCIMAN replied: My predecessor's statement referred to the additional money proposed to be provided in connexion with the Education Bill. I am not in a position to make any statement as to the possibility of giving an increased Exchequer grant in aid of elementary education.

The Administration of Anæsthetics.

Mr. BRAMSDON asked the Secretary of State for the Home Department whether his attention had been called to certain deaths under anæsthetics; whether he had yet received the contemplated reply from the President of the General Medical Council to the communication addressed to him and the nature of such reply; and whether, having regard to the number of deaths that were constantly

occurring in all parts of the country of persons whilst under anæsthetics, he would consider the advisability of recommending the appointment of a Royal Commission to inquire into the matter.—Mr. GLADSTONE (by written answer) replied: My attention has not been called to the cases mentioned, except by my honourable friend's question. I have now received, through the Lord President of the Council, a reply from the General Medical Council. The Council does not see its way to support legislation to make practical training in the use of anæsthetics a compulsory part of medical education, but it is communicating with the several licensing bodies as to how far they have given effect to the Council's recommendations on this subject.

WEDNESDAY, DEC. 16TH.

Tuberculosis Prevention (Ireland) Bill.

The House considered the Tuberculosis Prevention (Ireland) Bill on report.

Part I. of this measure provides for the notification of Tuberculosis in Ireland.

Mr. BIRRELL moved a new clause to make Part I. of the Bill adoptive. The clause was in the following terms:—

"1. This part of this Act shall extend to any urban or rural sanitary district in Ireland after the adoption thereof.

2. The sanitary authority of any such urban or rural sanitary district may, subject to the approval of any county council in which the district is situated, adopt this part of this Act by a resolution passed at a meeting of the authority.

3. Fourteen clear days at least before the meeting a summons to attend the meeting, specifying the business to be transacted, and signed by the clerk of the sanitary authority, shall be sent by post to, or delivered at the usual place of abode of, every member of the sanitary authority.

4. A resolution adopting this part of this Act shall be published by advertisement in local newspapers and by handbills."

This new clause was agreed to. Other amendments of less importance were also embodied in the Bill. When the report stage was completed the Bill was read a third time.

BOOKS, ETC., RECEIVED.

ALLMAN AND SON, LIMITED, 67, New Oxford-street, London, W.C.

The Voice and its Control. By Churchill Sibley, Mus.D. Price 2*s.* 6*d.* net.

BALE (JOHN), SONS, AND DANIELSSON, LIMITED, Oxford House, Great Titchfield-street, London, W.

The Bradshaw Lecture on Massive Collapse of the Lung. By W. Pasteur, M.D., F.R.C.P., Physician to the Middlesex Hospital and Consulting Physician to the Queen's Hospital for Children. Price not stated.

BLACK, A. and C., Soho-square, London, W.

Who's Who, 1909. Price 10*s.* net.
Who's Who Year-book, 1909. Price 1*s.* net.
The Writers' and Artists' Year-book, 1909. Price 1*s.* net.
The Englishwoman's Year Book and Directory, 1909. Edited by G. E. Mitton. Price 2*s.* 6*d.* net.

BURROUGHS, WELLCOME, AND CO., London.

Wellcome's Photographic Exposure Record and Diary. 1909. Northern Hemisphere. Price 1*s.*

CASSELL AND COMPANY, LIMITED, London, Paris, New York, Toronto, and Melbourne.

Letts's Medical Diary for the year 1909. Space for 54 patients' names daily, prices, cloth, 2*s.* 6*d.*; tuck, 3*s.* 6*d.*; elastic band, 4*s.* Space for 108 patients' names daily, prices, cloth, 4*s.*; tuck, 5*s.*; elastic band, 5*s.* 6*d.*
Letts's Pocket Diary for 1909. No. 111. Limp cloth, gilt edges, Price 2*s.* net.
Letts's Diary for 1909. No. 69. Limp cloth, price 6*d.* net. (For waistcoat pocket.)
Letts's No. 31 Rough Diary. With a Week in an Opening. 1909. Price 1*s.* 6*d.*, or with blotting, 2*s.* 6*d.*
Letts's No. 34 Rough Diary. With a Week on a page. 1909. Price 1*s.* Interleaved with blotting.

CONSTABLE, ARCHIBALD, AND CO., LIMITED, 10, Orange-street, Leicester-square, London, W.C.

The Country Home. Volume I., May to October, 1908. Price 5*s.* net.

FISCHER, GUSTAV, Jena.

Untersuchungen über das Atrioventrikularbündel im menschlichen Herzen. Von Privatdozent Dr. J. G. Mönckeberg, I. Assistent am Patholog.-anatom. Institut der Universität Giessen. Price M.25.
Notwendigste Angaben für die Kostordnung Diabetischer. Zum Handgebrauch der Aerzte zusammengestellt. Von B. Naunyn. Price Pf.60.
Die Wurmfortsatzentzündung. Eine pathologische-histologische und Pathogenetische Studie. Von L. Aschoff, Professor der Allg. Pathologie und Patholog. Anatomie, Freiburg i.B. Price M.15.

GOVERNMENT PRINTING OFFICE, Washington.

Index-Catalogue of the Library of the Surgeon-General's Office, United States Army. Authors and Subjects. Second Series. Vol. XIII., Periodicity-Prussia. Price not stated.

HEALTH RESORTS GUIDES, 42A, Westbere-road, London, N.W.

Continental Health-Resorts, Spas, Hydropathics, Sanatoria, Climatic Resorts, and Seaside Places. A Handbook for the Traveller on the Continent. Price 1*s.* net.

KEGAN PAUL, TRENCH, TRÜBNER, AND CO., LIMITED, Dryden House, 43, Gerrard-street, London, W.

The International Scientific Series. Edited by F. Legge. Human Speech. A Study in the Purposive Action of Living Matter. By N. C. Macnamara, F.R.C.S., Fellow of King's College, London, Surgeon-Major, Indian Medical Service, Retired; "Author of History of Asiatic Cholera," &c. Price 5*s.*

MARHOLD, CARL, Halle a.S.

Sammlung zwangloser Abhandlungen aus dem Gebiete der Verdauungs und Stoffwechsel-Krankheiten. Herausgegeben von Professor Dr. A. Albu in Berlin.
Das Indikationsgebiet des Alkohols bei der Behandlung innerer Krankheiten. Von Professor Dr. Georg Rosenfeld, Breslau. (I. Band, Heft 5.) Price M.1.20.
Die Atonische und die Spastische Obstipation. Ihre Differentialdiagnose und Behandlung. Von Privatdozent Dr. Gustav Singer, Primararzt am k.k.Krakenhause "Rudolf-Stiftung" in Wien. (I. Band, Heft 6.) Price M.1.
Das Koma Diabeticum und Seine Behandlung. Von Dr. A. Magnus-Levy, Berlin. (I. Band, Heft 7.) Price M.1.40.

REYNOLDS-BALL'S GUIDES, 27, Chancery-lane, London, W.C.

The Levantine Riviera. A Practical Guide to all the Winter Resorts from Genoa to Pisa. By W. T. Beeby, M.D., and Eustace Reynolds-Ball, F.R.G.S. Price 2*s.* 6*d.* net.

SANITARY PUBLISHING COMPANY, LIMITED, 5, Fetter-lane, London, E.C.

Guide to the Examination of School Children for the Use of School Medical Officers. By C. J. Russell McLean, M.D., D.P.H., Medical Officer of Health, Doncaster Rural and Tickhill Urban Councils. Price 6*d.* net.

SAUNDERS (W. B.) COMPANY, Philadelphia and London.

Saunders' Question-Compends, No. 20. Essentials of Bacteriology. Being a Concise and Systematic Introduction to the Study of Bacteria and Allied Microörganisms. By M. V. Ball, M.D., Member of the Academy of Natural Sciences of Philadelphia, Consulting Ophthalmologist and Aurist to the State Hospital at Warren, Pa. Sixth edition, thoroughly revised. Price 4*s.* net.
A Manual of Clinical Diagnosis. By James Campbell Todd, Ph.B., M.D., Associate Professor of Pathology, Denver and Gross College of Medicine (University of Denver), Pathologist and Clinical Microscopist to Mercy, St. Anthony's, and the Denver City and County Hospitals. Price 10*s.* net.
Principles and Practice of Physical Diagnosis. By John C. DaCosta, Jr., M.D., Associate in Clinical Medicine, Jefferson Medical College, Chief of Medical Clinic and Assistant Visiting Physician, Jefferson Hospital. Price 15*s.* net.
A Text-book of General Bacteriology. By Edwin O. Jordan, Ph.D., Professor of Bacteriology in the University of Chicago and in Rush Medical College. Price 13*s.* net.

SCHWEIZERBART'sche (E.) VERLAGSBUCHHANDLUNG (E. NÄGELE), Stuttgart.

Die Topographie des Lymphgefässapparates des menschlichen Körpers und ihre Beziehungen zu den Infektionswegen der Tuberkulose. Von Dr. August Most, dirigierendem Arzte der chirurgischen Abteilung des St. Georg-Krankenhauses in Breslau und korrespondierendem Mitgliede der internationalen Vereinigung gegen die Tuberkulose (Bibliotheca Medica, Abteilung C.). Price M.12.

VIGOT FRÈRES, 23, Place de l'Ecole-de-Médecine, Paris.

Indications Opératoires dans les Affections de l'Estomac. Par le Dr. A. Delangre, de Tournai. Price Fr.5.
Les Colloïdes en Biologie et en Thérapeutique. Le Mercure Colloïdal Électrique. Par G. Stodel, Préparateur au Laboratoire de Physiologie de la Sorbonne. Price Fr.6.
L'Examen Fonctionnel de l'Intestin par le Régime d'Épreuve, son Application à la Pratique Journalière et ses Résultats pour le Diagnostic et la Thérapeutique. Par le Dr. Adolphe Schmidt, de l'Université de Halle. Traduit par le Dr. Robert S. Kolbé (de Châtel-Guyon), des Facultés de Paris, Lausanne et Buenos Ayres. Price Fr. 5.

VOGEL, F. C. W., Leipzig.

Pathologie und Therapie der Perityphlitis (Appendicitis). Bearbeitet von Dr. Eduard Sonnenburg, Geheimer Medicinalrat, Ordentlicher Honorar-Professor an der Universität, Director der Chirurg. Abteilung des Städt. Krankenhauses Moabit in Berlin. Sechste umgearbeitete Auflage. Price M.6.

WALKER, JOHN, AND CO., LIMITED, Farringdon House, Warwick-lane, London, E.C.

Walker's Diaries for the Year 1909:—No. 3, crocodile, price 14*s.* Binding No. 83 (solid pigskin), "back-loop" and pencil, no pockets. Price 2*s.* 6*d.* No. 4, back-loop and pencil, no pockets. Binding No. 74. American Russia. Price 3*s.* 9*d.* No. 7, fast bound, no pencil, no pockets. Binding No. 127. Solid pigskin. Price 2*s.* 6*d.* No. 15, "Small Graphic." Fast bound, no pencil. Binding No. 425. Solid pigskin. Price 1*s.* 6*d.* No. 17, "Large Graphic." Fast bound, no pencil. Binding No. 317. Long grain leather. Price 1*s.* 6*d.* Quarterly Pocket Diary. In Four Parts. Binding No. 621. Long grain leather. Price 1*s.* 6*d.* Ruby Diary. Prices 6*d.* and 1*s.*
Calendars for Waistcoat Pocket:—"Happy Months" Calendar. Prices 6*d.*, 1*s.*, and 1*s.* 6*d.* "Golden Thoughts" Calendar. Prices 4*d.* and 6*d.* Vest-pocket Calendar. Printed on silk in red and black. Price 6*d.*

WERTHEIMER, LEA, AND CO. (printed by), 46 and 47, London Wall, London. (THE TIMES BOOK CLUB (to be obtained at), 376 to 384, Oxford-street, London, W.)

Mrs. Horace Dobell at Home: A Life Sketch. Illustrated by Selections from her Works, Portraits, and Other Plates. Price 2*s.* 6*d.* net.

WRIGHT, JOHN, AND SONS, LIMITED, Bristol. SIMPKIN, MARSHALL, HAMILTON, KENT, AND CO., LIMITED, London.

Wright's Improved Physicians' and Surgeons' and Consultants' Visiting List. Compiled by Robert Simpson, L.R.C.P., L.R.C.S. Form A. 1909. Sixteenth edition. Prices, for 40 or 80 patients, 5*s.*; for 120 or 160, 5*s.* 6*d.*; for 200, 6*s.* 6*d.*; for 240, 7*s.*

WYMAN AND SONS, London; OLIVER AND BOYD, Edinburgh; and E. PONSONBY, Dublin.

The Russo-Japanese War. Medical and Sanitary Reports from Officers attached to the Japanese and Russian Forces in the Field. Price 5s.

YELLON AND MANSFIELD, THE CELTIC PRESS, 43, Chancery-lane, London, W.C.

Infected Ears. (Intrameatal Treatment.) By F. Faulder White, F.R.C.S. Eng., Hon. Surgeon, Coventry and North Warwickshire Hospital and to the Ear and Throat Department. Price 5s. net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BYER, GORDON, L.D.S. Eng., has been appointed Honorary Dental Surgeon to St. John's Hospital, Twickenham.

HUTTON, H. R., M.B. Cantab., has been appointed Lecturer in Diseases of Children in the University of Manchester.

PENDLEBURY, H. S., F.R.C.S. Eng., has been appointed Additional Examiner in Surgery at the University of Cambridge.

SANDILAND, DIGBY S., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Superintendent at St. George's Infirmary, Hanover-square, W.

SCRUBY, Miss Z. M., M.B., B.S. Lond., has been appointed Resident Medical Officer at the Jenny Lind Infirmary for Children, Norwich.

SNAPE, HAROLD, M.B., Ch.B. Vict., has been appointed Honorary Physician to the Pendleton Branch Dispensary of the Salford Royal Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BIRMINGHAM, QUEEN'S HOSPITAL.—House Surgeon for six months. Salary at rate of £50 per annum, with board, lodging, and washing.

BLACKPOOL, COUNTY BOROUGH OF.—School Medical Officer (female). Salary £200 per annum.

BRIGHTON, SUSSEX COUNTY HOSPITAL.—Assistant Pathologist. Salary £80 per annum, with board, residence, and laundry.

CARDIFF CITY MENTAL HOSPITAL, Whitchurch.—Junior Assistant Medical Officer, unmarried. Salary £170, with quarters and all found.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road, W.C. —Registrars.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—House Surgeon, unmarried. Salary £80 per annum.

CHORLTON UNION WORKHOUSE HOSPITALS, Withington, Manchester.—Junior Resident Medical Officer. Salary £100 per annum, with rations, apartments, and attendance.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House Physician for six months. Salary at rate of £50 per annum, with board, washing, and residence.

COLCHESTER, ESSEX COUNTY HOSPITAL.—House Physician. Salary £80 per annum, with board, residence, and washing.

COVENTRY AND WARWICKSHIRE HOSPITAL.—Senior House Surgeon. Salary £120 per annum, with rooms, board, washing, and attendance. Also Honorary Medical Officer.

DERBYSHIRE ROYAL INFIRMARY.—Two House Surgeons, One House Physician, and One Assistant House Surgeon. Salary of three former £100 per annum, with apartments, board, &c.; and of latter at rate of £60 per annum, with apartments, board, &c.

DEVON AND CORNWALL SANATORIUM FOR CONSUMPTIVES, Didworthy, South Brent.—Resident Medical Superintendent. Salary £250, with residence, board, and laundry.

DEVONPORT, ROYAL ALBERT HOSPITAL.—Resident Medical Officer, unmarried. Salary £100 per annum, with apartments, board, &c.

DUBLIN, DR. STEEVENS' HOSPITAL.—House Surgeon. Salary £100 per annum, with apartments, fire, and light.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—House Physician. Salary at rate of £75 per annum, with board, residence, and laundry.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge-road, London, S.E.—Aural Surgeon, also Clinical Assistants.

GLOUCESTER GENERAL INFIRMARY AND GLOUCESTERSHIRE EYE INSTITUTION.—Assistant Physician. Also Assistant House Surgeon for six months. Salary at rate of £80 per annum, with board, residence, and washing.

GREAT NORTHERN GENERAL HOSPITAL.—Physician.

GREAT YARMOUTH HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board, lodging, and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Physician, unmarried, for six months. Salary £30, with board and residence.

LIVERPOOL DISPENSARIES.—Assistant Surgeon, unmarried. Salary £100 per annum, with board and apartments.

LIVERPOOL INFECTIOUS DISEASES HOSPITAL.—Three Assistant Resident Medical Officers, unmarried. Salary £120 per annum each, with board, washing, and lodging.

LIVERPOOL INFIRMARY FOR CHILDREN.—House Surgeon and House Physician for six months. Salary in each case £30, with board and residence.

LIVERPOOL, ROYAL SOUTHERN HOSPITAL.—House Physician. Salary £60 per annum, with board and residence.

LONDON LOCK HOSPITAL, 91, Dean-street, Soho.—House Surgeon. Salary £100 per annum, with board, lodging, and washing.

LOUGHBOROUGH AND DISTRICT GENERAL HOSPITAL AND DISPENSARY. —Resident House Surgeon. Salary £100 per annum, with rooms, attendance, board, and washing.

MERTHYR TYDFIL EDUCATION COMMITTEE.—Medical Inspector of School Children. Salary £250, rising to £350 per annum.

MIDDLESEX HOSPITAL, W.—Second Assistant to the Director of the Bacteriological and Clinical Laboratories. Salary £100 per annum.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Hampstead and Northwood, Middlesex.—Assistant Resident Medical Officer. Salary £50 per annum, with board and residence.

NEWCASTLE-UPON-TYNE, CITY LUNATIC ASYLUM, Gosforth.—Assistant Medical Officer, unmarried. Salary £140 per annum, with apartments, board, and laundry.

NORTHAMPTON GENERAL HOSPITAL.—Senior Resident Medical Officer, unmarried. Salary £120 per annum, with apartments, board, washing, &c.

NOTTINGHAM CHILDREN'S HOSPITAL.—House Surgeon (female) for six months. Salary at rate of £80 per annum, with board, &c.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon. Salary £160 per annum, with apartments, attendance, light, and fuel.

NOTTS CONSUMPTION SANATORIUM.—Resident Medical Officer (female). Salary £100 per annum.

PAISLEY, BOROUGH OF.—Medical Officer of Health. Salary £400 per annum.

POPLAR HOSPITAL FOR ACCIDENTS, Poplar.—Honorary Surgeon.

QUEEN ALEXANDRA'S HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, E.—Assistant Resident Medical Officer. Salary £75 per annum, with board, residence, and washing.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, N.W.—Assistant Resident Medical Officer. Salary at rate of £50 per annum, with board, residence, and washing.

ROTHERHAM HOSPITAL AND DISPENSARY.—Senior House Surgeon. Also Assistant House Surgeon. Salary of former £110 per annum and of latter £80 per annum, with rooms, commons, and washing in each case.

RHONDDA URBAN DISTRICT COUNCIL.—Medical Examiner of Elementary School Children. Salary £250 per annum, with travelling expenses.

ROYAL EAR HOSPITAL, Soho.—House Surgeon for six months. Salary at rate of £40 per annum.

ST. GEORGE'S HOSPITAL, Hyde Park-corner, S.W.—Resident Anæsthetist. Salary at rate of £100 per annum, with board and residence.

ST. HELENS COUNTY BOROUGH.—Assistant Medical Officer. Salary £250 per annum, rising to £350.

ST. MARK'S HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM, City-road, E.C.—Clinical Assistants.

SALISBURY INFIRMARY.—Assistant House Surgeon, unmarried. Salary £50 per annum, with apartments, board, lodging, and washing.

SOUTHPORT, COUNTY BOROUGH OF, EDUCATION DEPARTMENT.—School Medical Officer. Salary £250 per annum.

TOXTETH PARK WORKHOUSE AND INFIRMARY.—Assistant Resident Medical Officer. Salary £100 per annum, with board, washing, and apartments.

VICTORIA HOSPITAL FOR CHILDREN, Tite-street, Chelsea, S.W.—House Physician for six months. Salary £30, with board, lodging, and laundry.

WEST HAM HOSPITAL, Stratford, E.—Junior House Surgeon. Salary at rate of £75 per annum, with board, residence, &c.

WEST LONDON HOSPITAL AND POST-GRADUATE COLLEGE, Hammersmith-road, W.—Clinical Assistants. Also Casualty Officers.

Births, Marriages, and Deaths.

BIRTHS.

BURGESS.—On Nov. 20th, 1908, at Secunderabad, India, the wife of J. Hay Burgess, M.B., F.R.C.S., Captain, I.M.S., of a daughter.

CARR.—On Dec. 11th, at 19, Cavendish-place, W., the wife of J. Walter Carr, M.D., F.R.C.P., of a son.

DICKIE.—On Dec. 10th, at Ryedale-terrace, Middlesbrough, the wife of W. S. Dickie, F.R.C.S., of a daughter.

DICKSON.—On Dec. 8th, to Dr. and Mrs. F. H. Dickson, 37, Holywell, Oxford, a daughter.

WHITE.—On Dec. 13th, at Moscow-court, W., the wife of C. T. R. White, L.R.C.P., L.R.C.S. Edin., of a son.

WOLFE.—On Dec. 10th, at Seward-road, Hanwell, W., the wife of John Henry Wolfe, M.R.C.S. Eng., L.R.C.P. Lond., a daughter.

MARRIAGES.

BALEAN—TERRELL.—On Dec. 1st, at St. Peter's, Bayswater, Hermann Balean, M.D., B.S. Lond., F.R.C.S. Eng., to Isabel, only daughter of Mr. Thomas Terrell, K.C.

COUTTS—WHITE.—On Dec. 12th, at St. James's, Spanish-place, W., David Kirkpatrick Coutts, F.R.C.S., &c., of Norwich, to Eleanor Kate, second daughter of the late Thomas John White, Esq., of Amana, Tulse Hill, S.W.

DEATHS.

JACKSON.—On Dec. 8th, 1908, Arthur Molyneux Jackson, M.D. Oxon., M.R.C.S., Medical Superintendent of Notts County Asylum at Radcliffe-on-Trent.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE TURVEY TREATMENT.

WE observe that the Turvey treatment is still alive and still possesses or states that it possesses the services of a highly-qualified English physician. The following is an advertisement which recently appeared in the *Morning Post*:—

> THE TURVEY TREATMENT for Home Cure of DRINK and DRUG HABITS. CONSULTING ROOMS open 10.30 to four. ADVICE FREE. Highly qualified English physician in attendance.—133 and 135, Regent-street, W. (side entrance), five minutes from Piccadilly-circus. Treatise sent post free. Telephone, 5,494 Gerrard.

It would be interesting to know the name of the highly qualified English physician associated with the treatment.

MNEMONICS.

To the Editor of THE LANCET.

SIR,—In THE LANCET of Dec. 12th you remark in reply to "Curious" that mnemonics in connexion with medicine (and anatomy) are best when they are home-made. One of the best I know is the following, which in a way "explains itself." It gives the order of the structures in the eyelid from without inwards: Skin O pal! ten (p)tar-mi-*con* (suggesting the word "ptarmigan")—i.e., skin, orbicularis (palpebrarum), palpebral ligament, tendon of the levator palpebræ, tarsal cartilage, Meibomian glands, conjunctiva. I know it was "home-made."

I am, Sir, yours faithfully,
HERBERT W. G. MACLEOD, M.D. Edin., M.R.C.P. Lond.
Upper Wimpole-street, W., Dec. 14th, 1908.

SUPERSTITION.

> The Cure for the White Plague and other disease given by GOD to Man, 1490 B.C.; revealed to a Woman, A.D. 1907.

WE have received, in common, no doubt, with many others, a booklet with this title announcing this marvellous revelation. The texts on which it is founded are from Exodus and Leviticus, and we leave it to our readers to search the Pentateuch for them. But if and when they are found we are sure that they will not perceive their application, for to do this requires the faith not only of a little child but of a little idiot, coupled with an ignorance of elementary physiology which in these days is remarkable.

CHANTECLAIR.

IN THE LANCET of June 6th we commented upon two caricatures published in an advertising periodical called *Chanteclair*. The caricatures in question purported to represent Professor Richet and Dr. Héricourt engaged in research. The pictures were such as might well have been treated by a rabid antivivisectionist as a representation of realities, and the fact that the two medical men concerned treated the publication with good humoured contempt made it all the more possible for the fanatics to say, "They do not deny this, therefore it must be true." The number for December now before us contains a brief biographical notice of Professor Gaucher who is, as is well known, an authority on syphilis and the mercurial treatment of the disease. He is represented by "Moloch," the caricaturist, in the act of administering a gluteal intra-muscular mercurial injection to a lady with a blue face—the cyanosis, we suppose, being caused by her position. The caricature might have come from the brush of Gilray, but manners have changed since his day, and coarseness is not nowadays synonymous with wit.

HEALTH MATTERS IN BARBADOS.

ACCORDING to the Blue-book of this colony for the year 1907-08, the estimated population is 194,518, but the figures are not considered to be trustworthy. During 1907 the birth-rate was 33·2 per 1000 of the estimated population, as against 37·2 for 1906 and 39·8 for 1905. The percentage of illegitimate births continues to be a high one, being 56·9 per cent. of the births recorded. The burials registered numbered 5236, which was less by 2330 than in the previous year. The death-rate per 1000 was 26·9. The death-rate of children of one year old and under was 302 per 1000. This heavy mortality seems to be due to improper feeding of infants, for which ignorance is partly responsible and partly circumstances of deeper origin. The matter has been under careful consideration and it is hoped that the circulation of carefully prepared instructions as to the proper treatment of infants will do something to mitigate the evil pending more radical measures. Towards the latter end of 1907 and the beginning of 1908 a few cases of yellow fever were reported, but these were of a somewhat abnormal type, and consequently there was some difference of opinio among medical men as to the correctness of the diagnosis. The health of the island was otherwise excellent. There is only one hospital in Barbados; it is situated in Bridgetown and is supported exclusively by the Government, although not directly under Government control. 4489 persons were treated in the hospital during the year, of whom 355 died. 21,906 out-patients were treated during the same period. The daily average number of patients in residence at the lunatic asylum was 359. During the year 14 were discharged as cured and three as relieved, while 53 died. In the lazaretto at the beginning of 1907, 126 inmates were in residence. During the year 14 new patients were admitted. 20 died during the year. 55 patients suffered from anæsthetic leprosy, while 58 were tubercular. It has not been the practice to discharge patients because the disease is arrested. Two patients escaped to neighbouring colonies during the year, but one was repatriated and re-confined. As lepers are not compulsorily segregated unless they come on the rates, the above figures do not give an exact idea of the prevalence of the disease in the island. Once in the lazaretto no leper can leave except by order of the Governor in Executive Committee.

WELLCOME'S PHOTOGRAPHIC EXPOSURE RECORD AND DIARY.

WE have just received the 1909 edition of this interesting and useful pocket-book which contains information upon many subjects connected with photography. Plates, exposure, developers, papers, printing, toning, fixing, and mounting are all discussed and valuable hints are given. Exposure is especially considered, as correct exposure is held to be the essence of success in photography. An instrument called "Wellcome's Exposure Calculator" is attached to the back cover of the book, and it is claimed for it that it indicates the correct exposure under any condition by one turn of one scale. Instructions are given for its use and the instrument is not difficult to understand. The price of the book is 1s. net.

PORTABLE BUILDINGS FOR OPEN-AIR TREATMENT.

THE success of the open-air treatment has made popular the chalet, the shelter, the verandah, and the porch both for the treatment of disease and for purposes of health and pleasure in connexion with the dwelling-house. Structures of this kind, however, are almost worse than useless if they are not built of well-seasoned wood and constructed on right plans. We have recently had placed in our hands the catalogue of Messrs. Boulton and Paul of Norwich. This firm are also large importers of timber, which is stacked on their premises until it is thoroughly seasoned before employment in making their various structures. Among these are revolving shelters which can be quite easily turned in any direction so as to take advantage of the sunshine, and one measuring only 8 feet by 6 feet, 7 feet to eaves and 10 feet to ridge, struck us as being very useful. This shelter gives room for two patients, allowing for a table placed between them, and is sold at the price of £20, but a similar structure a little less artistic in shape and appearance can be obtained for £12 10s. Verandahs are made so that they can be purchased at so much (about 16s.) per foot, and having regard to the infinite varieties of measurement that may be wanted this is a useful idea. The usual form of verandahs which covers a space on the ground floor may also be used as balconies on upper floors, and there are many institutions where the addition of such balconies at a reasonable figure would be a very proper improvement. The catalogue also contains illustrations and ground plans of buildings which can be erected at very short notice, with pictures of certain such buildings already in existence. Among these we noticed pictures of the pretty little sanatorium which has been erected at Mundesley, Norfolk, of the hospital buildings at Devonport constructed for the Government, and of the Alton, Hants, Hospital which was built as the outcome of the *Daily Mail* "Absent-Minded Beggar Fund." Examples of military hospitals are also shown as well as temporary structures which municipal authorities are sometimes called upon to erect on exceptional occasions. The catalogue is in this way made into a useful book of reference.

Semper paratus.—Our correspondent's question is too vaguely worded and deals with too complicated matters to be answered offhand. Most bacilli are killed by exposure to the temperature of boiling water (100° C.) for half an hour, but spores are much more resistant. "The heat of roasting" is too indefinite a term for anything to be definitely laid down as to its bactericidal qualities.

China.—There will be no objection to our correspondent addressing the official in question but if he prefers to wait until we can receive an answer from our local representative we will submit the questions for him.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Manchester Guardian, Liverpool Post, Daily News, Star, Yorkshire Post, Glasgow Herald, Pall Mall Gazette, Daily Chronicle, Hull Eastern Morning News, Sheffield Weekly Telegraph, Daily Telegraph, Liverpool Mercury, Birmingham Post, Irish Independent, Scotsman, Army and Navy Gazette, &c.*

Medical Diary for the ensuing Week.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10 A.M., Surgical Out-patient (Mr. H. Evans). 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Nose, Throat, and Ear (Mr. H. W. Carson); X Rays. 4.30 P.M., Medical In-patient (Dr. A. J. Whiting).

TUESDAY.—Clinic: 10 A.M., Medical Out-patient (Dr. A. G. Auld). 2.30 P.M., Operations (Mr. Carson). Clinics:—Surgical Out-patient (Mr. W. Edmunds); Gynæcological (Dr. A. R. Giles). 4.30 P.M., Lecture-Demonstration:—Dr. A. H. Pirie: The Therapeutic Uses of X Rays in General Practice.

WEDNESDAY.—Clinics:—2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Skin (Dr. G. N. Meachen); Eye (Mr. R. P. Brooke). 4.30 P.M., Dr. S. J. Gilfillan: Demonstration of Cases of Mental Disease at the Colney Hatch Asylum, N.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (21st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.).

TUESDAY (22nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.).

WEDNESDAY (23rd).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.).

THURSDAY (24th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M).

FRIDAY (25th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.20 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.).

SATURDAY (26th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospital operations are performed daily.

EDITORIAL NOTICES

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, London, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will insure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

THE COLONIAL AND FOREIGN EDITION (printed on thin paper) is published in time to catch the weekly Friday mails to all parts of the world.

The rates of subscriptions, post free, either from THE LANCET Offices or from Agents, are:—

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance. Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Offices, 423, Strand, London, W.C.

TO COLONIAL AND FOREIGN SUBSCRIBERS.

SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE. It has come to the knowledge of the Manager that in some cases higher rates are being charged, on the plea that the heavy weight of THE LANCET necessitates additional postage above the ordinary rate allowed for in the terms of subscriptions. Any demand for increased rates, on this or on any other ground, should be resisted. The Proprietors of THE LANCET have for many years paid, and continue to pay, the whole of the heavy cost of postage on overweight foreign issues; and Agents are authorised to collect, and generally do so collect, from the Proprietors the cost of such extra postage.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied. Address—THE MANAGER, THE LANCET OFFICES, 423, STRAND, LONDON, ENGLAND.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 17th, 1908.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain-fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Dec. 11	28·78	N.W.	0·11	61	45	40	40	41	Cloudy
,, 12	29·42	N.W.	...	62	45	40	40	44	Fine
,, 13	29·49	W.	0·13	63	53	40	47	47	Cloudy
,, 14	29·54	S.	0·06	54	51	46	49	49	Overcast
,, 15	29·36	S.W.	0·30	65	51	46	45	47	Cloudy
,, 16	29·60	S.	...	51	50	45	45	45	Overcast
,, 17	29·41	S.W.	0·06	56	52	45	46	47	Raining

Communications, Letters, &c., have been received from—

A.—Monsieur J. Astier, Asnières; Ardath Tobacco Co., Lond.; Mr. G. Augustin, New Orleans; A. H. S.; After-Care Association, Lond., Secretary of; Mr. A. J. Adolph, Sutton; Anglo-American Pharmaceutical Co., Croydon, Managing Director of; Messrs. Allen and Hanburys, Lond.; Automatic Disinfector Co., Nottingham, Secretary of; Dr. John Allan, Edinburgh; Miss L. Garrett Anderson, Lond.; Mr. Thomas Allen, Newquay; Mr. E. Arnold, Lond.; A. R. H.

B.—Dr. W. E. Barton, Lond.; Messrs. J. Boulton and Co., Lond.; Mr. J. W. Benson, Lond.; Mr. E. Baker, Birmingham; Belfast District Lunatic Asylum, Clerk to the; Mr. C. Birchall, Liverpool; Mr. W. L. Byham, Sunbury-on-Thames; "*The Bookshelf*," Lond., Editor of the; Dr. Clifford Beards, Lond.; Mr. H. Butterfield, Northampton; Mr. W. Bubb, Cheltenham; Messrs. Blundell and Rigby, Lond.; Dr. E. Coey Bigger, Lond.; Bethnal Green Free Library, Lond., Secretary and Librarian of; Mr. R. Blewitt, Hampton Hill.

C.—Sir E. H. Currie, Lond.; Messrs. Cassell and Co., Lond.; Continental Tyre and Rubber Co., Lond.; Coventry and Warwickshire Hospital, Secretary of; Chorlton Union, Clerk to the; Dr. G. Campanella, Rome; Dr. Leonard B. Cane, Peterborough; Dr. S. W. Carruthers, Lond.; Dr. James Cameron, Edinburgh; College of Preceptors, Lond., Secretary of; Mr. F. W. Clarke, Chorlton-cum-Hardy; Clinical Society of Manchester, Hon. Librarian of.

D.—Devon and Cornwall Sanatorium for Consumption, Plymouth, Hon. Secretary of; Mrs. Dumphy, Randall's Island; Droitwich Brine Baths, Manager of; D. R. R.

E.—Mr. F. H. Edwards, Lond.; Mr. W. R. Elderfield, Lond.; Mr. T. Crisp English, Lond.; Mr. J. Elston, Hyères; Dr. J. Erskine, Glasgow.

F.—Dr. Leonard Findlay, Glasgow; Mr. T. R. Freeman, Monckton Combe; Messrs. Fletcher, Fletcher and Co., Lond.; Messrs. Fairchild Bros. and Foster, Lond., Dr. S. F. Fox, Lond.; The Fellows Company of New York, Secretary of; Mr. Almeric W. FitzRoy, Lond.

G.—Dr. A. H. Gerrard, Croydon; Mr. W. D. Gittins, Liverpool; Gloucester General Infirmary, Secretary of; Great Yarmouth Hospital, Hon. Secretary of; Messrs. Gale and Co., Lond.; Dr. E. Gillespie, Lond.; Dr. W. Gordon, Exeter; General Apothecaries' Co., Lond., Secretary of.

H.—Dr. W. D. Halliburton, Lond.; Dr. John Henderson, Glasgow; Miss Hawthorn, Lond.; Fleet-Surgeon Robert Hill, R.N., Malta; Dr. W. A. Hollis, Hove; Dr. J. O. Hollick, Dorridge; Mr. Eric Harries, Lond.; H. A. B.; Messrs. Hankinson and Son, Boscombe; Health Resorts Guides, Lond., Manager of.

I.—International Plasmon, Lond.; Indiarubber, Gutta Percha, and Telegraph Works, Lond., Secretary of; Imperial Accident Insurance Co., Lond.; Messrs. Ingram and Royle, Lond.

J.—Dr. Oscar Jennings, Cannes; Mr. G. A. Jennings, Newcastle-on-Tyne; Dr. P. S. Jakins, Lond.

K.—Messrs. Kutnow and Co., Lond.; Mr. W. P. Kenyon, Sheffield; Messrs. Knoll and Co., Lond.; Dr. A. Konried, Monte Carlo.

L.—Messrs. Luzac and Co., Lond.; Miss Little, Melrose; Messrs. W. Le Lacheur and Son, Lond.; Loughborough General Hospital, Secretary of; Local Government Board, Lond., Medical Officer of; Messrs. Lee and Nightingale, Liverpool; Miss E. E. Lyde, Lond.; Mr. R. Lake, Lond.; Dr. F. E. Larkins, Guildford; Liverpool Medical Institution, Secretary of; London Pure Milk Association, General Manager of.

M.—Dr. B. M. Mules, Kenton; Mr. J. S. Manson, Warrington; Messrs. Thomas Christy and Co., Lond.; Dr. W. J. Maloney, Cairo; Dr. George H. Masson, Trinidad; Dr. Herbert W. G. Macleod, Lond.; Messrs. McKesson and Robbins, New York; Dr. W. J. McCardie, Birmingham; Dr. F. G. Miranda, Granada; Mr. J. E. McKenna, Encino; Messrs. Matthews Bros., Lond.; Messrs. Mackie and Co., Glasgow; Mr. H. Makepeace, Chester; Maltine Manufacturing Co., Lond.; M. A. A.; Mr. J. E. May, Lond.; Mr. G. T. Moody; Dr. William Mair, Manchester; Mr. J. M. Mangan, Ennis; Mr. G. P. Mudge, Lond.

N.—Dr. David Newman, Glasgow; Dr. Newman Neild, Clifton; Dr. L. E. C. Norbury, Lond.; Messrs. Newton and Co., Lond.; Negapatam, India, Civil Surgeon of; Nottinghamshire Consumption Sanatorium, Nottingham, Hon. Secretary of; Mr. H. Needes, Lond.; Mr. J. C. Needes, Lond.; Nottingham General Dispensary, Secretary of.

O.—Baron de Oliveira, Lond.; Dr. J. M. O'Meara, Lond.

P.—Lady Priestley, Lond.; Mr. G. H. Pridham, Newton Ferrers; Mr. Herbert J. Paterson, Lond.; Price's Patent Candle Co., Lond., Secretary of; Dr. Pierre's Eau Dentifrice, Lond., Secretary of; Dr. Urban Pritchard, Lond.; Dr. F. J. Poynton, Lond.; Messrs. Peacock and Hadley, Lond.

R.—Royal Microscopical Society, Lond., President and Council of; Dr. W. B. Ransom, Nottingham; Messrs. Reitmeyer and Co., Lond.; Royal Sanitary Institute, Lond.; Messrs. Reynolds and Branson, Leeds; Dr. Romeo, Lond.; Mr. H. Rushmer, Lond.; Royal Sanitary Institute, Lond., Secretary of; Royal Meteorological Society, Lond., Assistant Secretary of; Royal College of Surgeons, Lond., Secretary of; Rotherham Hospital and Dispensary, Secretary of; Mr. Hugh C. Ross, Liverpool.

S.—Dr. J. N. Stark, Glasgow; Dr. H. E. Symes-Thompson, Lond.; St. George's Hospital Medical School, Lond., Dean of; St. Pancras School for Mothers, Lond., Hon. Secretary of; Star Engineering Co., Wolverhampton; Messrs. Slack and Cox, Manchester; Messrs. Sehg, Sonnenthal and Co., Lond.; Smith's Advertising Agency, Lond.; St. Helen's Corporation, Medical Officer of Health of; Scottish Poor-Law Medical Association, Glasgow, Secretary of; Scientific Press, Lond., Manager of; *South Wilts Mirror*, Salisbury, Manager of; Dr. C. Slater, Lond.; Mr. A. Sieger, Greenock; Messrs. Squire and Sons, Lond.; Dr. H. R. D. Spitta, Lond.

T.—Dr. H. Taylor, Llandovery; Trommer Co., Lond., Manager of.

W.—Mr. James Watson, Lond.; Messrs. Witherby and Co., Lond.; Messrs. J. Wright and Sons, Bristol; Mr. W. Winter, Lond.; West Ham Hospital, Lond., Secretary of; Mr. A. Wander, Lond.; Messrs. J. Watson and Co., Lond.; Messrs. Willows, Francis, Butler, and Co., Lond.; Dr. W. Winslow, Rapallo.

Y.—Dr. Meredith Young, Lond.

Z.—*Zeitschrift für Neuere Physikalische Medizin*, Berlin.

Letters, each with enclosure, are also acknowledged from—

A.—Alliance Bank of Simla, Calcutta, Manager of; A. F.

B.—Dr. C. E. Baker, Lond.; Mr. F. A. Barth, Leipzig; Bhavnagar State, India, Chief Medical Officer of; Birmingham, &c., Skin Hospital, Secretary of; Captain J. H. Burgess, I.M.S., Secunderabad; British and Foreign School Agency, Manchester, Secretary of; Messrs. Bates, Hendy, and Co., Reading; B., Brighton; Mr. D. R. Bowen, Ashton-in-Makerfield; Miss C. M. Brown, Rome; Mr. E. J. Blackett, Lond.

C.—Mr. W. J. Caesar, Lond.; Dr. J. F. Corson, Stone; Mr. S. D. Cole, Bristol; C. D.; Messrs. Cadbury Bros., Bournville; Croydon Corporation, Accountant to the; Dr. H. Christal, Hoxne; Dr. T. Carruthers, Kilbarchan; Messrs. Clarke, Son, and Platt, Lond.; C. J. E. H.; C. C. S.; C. P. W.

D.—Paul E. Derrick Advertising Agency, Lond.; Mr. R. Davis, Lond.; Mr. M. S. Doubble, Luton.

E.—East Suffolk and Ipswich Hospital, Secretary of; Dr. E., New Brancepeth; The Electromobile Co., Lond., Manager of; Messrs. Evans and Witt, Lond.

F.—Mr. F. P. Flood, Cefn Coed; Mr. A. A. Finlay, Paris; Dr. W. B. O. Ferguson, Robin Hood's Bay.

G.—Mr. J. P. Gaunt, Lond.; G. A. C.

H.—Messrs. Hastings Bros., Lond.; Huddersfield Infirmary, Secretary of; H., Worcester; Messrs. Abel Heywood and Son, Manchester.

J.—Jessop Hospital for Women, Sheffield, Secretary of; J. F.

L.—Mr. H. K. Lewis, Lond.; Dr. C. E. M. Lewis, Bromley; Dr. A. E. G. Langschmidt, Worcester, Cape Colony; Staff-Surgeon L. Lindop, R.N., Portsmouth; Lightburn Hospital, Glasgow, Treasurer to the; Leith Hospital, Treasurer to the; L. D.

M.—Mrs. MacNatty, Winchester; Professor Dr. R. Metzner, Basle; Messrs. Menzies and Co., Glasgow; Messrs. Menzies and Co., Edinburgh; Dr. D. R. Mitchell, Varteg; Medical Mission Hospital, Canning Town, Hon. Secretary of; Messrs. Macmillan and Co., Lond.; "Medicus," Kensington; Messrs. Masson et Cie, Paris; Mr. G. W. Macalpine, Accrington; Messrs. McDougall Bros., Manchester.

N.—Mr. F. W. North, Grantham; Dr. A. E. Naish, Sheffield; North Riding Infirmary, Middlesbrough, Secretary of; National Bank of India, Karachi, Manager of; National Dental Hospital, Lond., Dean of; Nurses' Co-operation, Lond., Secretary of.

O.—Oxford Eye Hospital, Hon. Secretary of; *Oxford Times*, Oxford, Manager of; Odol Chemical Works, Lond.

P.—Mr. G. A. Pullen, Lond.; P. S.; Dr. A. M. Pryce, St. Asaph; Dr. T. S. P. Parkinson, Benton; Prestwich Union, Clerk to the; Mr. H. C. Pauli, Middleham; Dr. L. Phillips, Cairo.

R.—Reeth Union, Clerk to the; Messrs. Rösing Bros. and Co., Lond.; Mr. M. Rangiah, Bellary, India; R. A. R.

S.—Dr. H. G. Stacey, Leeds; Mr. W. J. Stephens, Newquay; Dr. G. H. Sieveking, Hamburg; Dr. Steeven's Hospital, Dublin, Accountant to the; Saltzjöbäden Sanatorium, near Stockholm; Dr. R. T. Slinger, Old Trafford; Mr. V. N. Singh, Lahore.

T.—Dr. J. C. Thresh, Chelmsford; Mr. B. K. Turnock, Huddersfield; T. C. F.; Dr. W. W. Thom, Bolton-on-Dearne; Dr. F. H. Thomson, Tottenham.

U.—Mr. J. L. Ure, Pollokshields.

V.—Messrs. Van Houten, Lond.

W.—Mr. F. F. White, Lond.; Mr. A. H. Wade, Milford Haven; Mr. E. A. Watson, Dundee; Wimbledon Education Committee, Secretary of; Western General Dispensary Lond., Secretary of; Worcestershire Open Air Sanatorium, Knightwick, Secretary of; Mr. F. H. Walker, Omaha; Mr. E. A. F. Wilkes, Sheffield; Dr. W. A. Winship, San Diego; Dr. G. H. Weber, Peoria, U.S.A.

EVERY FRIDAY. **THE LANCET.** PRICE SEVENPENCE.

SUBSCRIPTION, POST FREE.

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

ADVERTISING.

Books and Publications ...	Seven Lines and under	£0 5 0
Official and General Announcements	Ditto	0 5 6
Trade and Miscellaneous Advertisements and Situations Vacant	Ditto	0 4 6
	Every additional Line	0 0 6

Situations wanted: First 30 words, 2*s.* 6*d.*; per additional 8 words, 6*d.*
Quarter Page, £1 10*s.* Half a Page, £2 15*s.* An Entire Page, £5 5*s.*

An original and novel feature of "THE LANCET General Advertiser" is a Special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice but is in itself an *additional* advertisement.

Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Office, 423, Strand, London, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 31, Rue Bapst, Asnières, Paris.